Do Foreign Lenders' National Cultures Affect Loan Pricing?

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Abstract: We examine the role of foreign lenders' national cultures in the pricing of syndicated loans. Using Schwartz's cultural dimensions, embeddedness and mastery, we find that foreign lenders domiciled in countries with higher embeddedness and mastery scores offer lower interest rates. These findings are robust to a battery of robustness tests and incremental to the effects of formal institutions. We also document that greater information asymmetry and foreign lenders' bargaining powers strengthen the impact of the foreign lenders' cultural values on loan pricing. An additional analysis shows that the intensity of loan covenants is also negatively related to the embeddedness and mastery scores of the foreign lenders' countries of domicile. Our findings suggest that cross-border debt contracting decisions are not only determined by objective judgments about risk and return but also depend on the subjective assertion of values and beliefs guided by informal institutions, such as cultural norms. Cultural values can nurture and shape economic incentives and perceptions of sophisticated professional bankers in increasingly globalized market settings, even when the financial stakes are substantial.

Keywords: syndicated loan, cost of debt, cross-border lending, national culture, Schwartz

JEL classifications: F34, G15, G21, G41

1. Introduction

This study examines the impact of foreign lenders' national cultures on loan pricing. Foreign banks are subject to higher information risk and expropriation risk than are their domestic counterparts (Buch, 2003; Haselmann & Wachtel, 2011; Mian, 2003, 2006; Petersen & Rajan, 2002; Vu, Do, & Skully, 2015). Their risk tolerance and appetite for compensation should play particularly important roles in the design of loan contract terms. We expect foreign lenders' attitudes toward risk and compensation to be affected by the national cultures of their countries of domicile. Cultural values "serve as guiding principles in people's lives" (Schwartz, 1994, p.88). They affect almost every aspect of human life. North (1990) points out that culture in the form of an informal institution has an even stronger power than formal legal and political institutions in shaping individuals' values, preferences, and incentives. Therefore, national culture is likely to play an important role in economic activities through its influence on market participants' behaviors and decision making.

Prior literature has established a link between cultural values and a range of bank activities, including accounting choices (Kanagaretnam, Lim, & Lobo, 2011, 2014), dividend policy (Zheng & Ashraf, 2014), risk taking (Ashraf, Zheng, & Arshad, 2016; Chircop, Fabrizi, Ipino, & Parbonetti, 2017; Mourouzidou-Damtsa, Milidonis, & Stathopoulos, 2017), stability (Carretta, Farina, Fiordelisi, Schwizer, & Lopes, 2015), and lending corruption (Zheng, El Ghoul, Guedhami, & Kwok, 2013). Our study extends this stream of research by investigating the impact of foreign banks' national cultures on their design of loan contract terms.

We capture national culture using Schwartz (1994)'s cultural dimensions. Schwartz classifies national culture into six value types consolidated into two dimensions: embeddedness and mastery. Embeddedness captures the extent to which individuals are viewed as entities embedded in a collective society. High embeddedness cultures prioritize harmonious group relationships, group interests, security, and public image. Mastery refers to the values that

promote active self-assertion to master, change, and exploit the natural and social environment. High mastery cultures accentuate individual success, capability, and taking control (Licht, Goldschmidt, & Schwartz, 2007). We expect the embeddedness scores of foreign lenders' countries of domicile to have a negative impact on the interest rates that they charge, while mastery scores are likely to have two opposing effects on interest rates.

Drawing on a sample of 1,221 syndicated loans extended by foreign banks to U.S. borrowers during the period of 1996-2017, we find that the foreign lenders from higher embeddedness countries charge lower interest rates. The mastery scores of the foreign lenders' countries of domicile are also negatively related to the interest rates imposed. These findings are robust to controlling for a range of firm-specific and loan-specific characteristics documented to affect interest spreads by prior literature. We also include some country-specific control variables to capture the effects of the economic condition and credit market development of the foreign lenders' countries of domicile. Our conclusions still hold when we exclude loans with multiple lead arrangers, correct the sample selection bias with Heckman (1979) two-stage model, address the potential endogeneity concern with 2SLS analysis, include additional foreign lender-specific and foreign lender country-specific control variables, consider the effects of the formal institutions of the foreign lenders' countries of domicile, and adopt alternative culture measures. In addition, we document that the impact of the foreign lenders' cultural values on interest spreads is more pronounced when the information asymmetry between the foreign lenders and the borrowers is higher and when the foreign lenders possess more bargaining powers. Finally, an additional analysis shows that both high embeddedness and high mastery cultures reduce the intensity of covenants imposed by foreign lenders.

This study adds to the debt contracting literature. Compared with the sizable research on how borrower characteristics affect the design of loan terms (e.g., Bae & Goyal, 2009; Chan,

Chen, & Chen, 2013; Graham, Li, & Qiu, 2008; Lin, Officer, Wang, & Zou, 2013; Pan, Yue Wang, & Weisbach, 2017; Qian & Strahan, 2007; Valta, 2012), research focusing on lender characteristics has been relatively limited. The extant literature in this area has examined the role of lenders' reputation (McCahery & Schwienbacher, 2010; Ross, 2010), competition (Bushman, Hendricks, & Williams, 2016; Lian, 2018), type (Demiroglu & James, 2015; Gatev & Strahan, 2009; Harjoto, Mullineaux, & Yi, 2006; Lim, Minton, & Weisbach, 2014), liquidity (Bord & Santos, 2014), and relationships within the lending group (Champagne & Kryzanowski, 2007; Panyagometh & Roberts, 2010; Wu, Chang, Suardi, & Chang, 2013). Our research complements this literature by providing original evidence for the effect of the informal institutions of the foreign lenders' countries of domicile. Moreover, we find that the effect of informal institutions on loan pricing is incremental to that of formal institutions, such as the legal environment.

In addition, this study contributes to the culture-finance literature in general and the culture-banking literature in particular. A growing body of research has investigated the role of national culture in a variety of economic and capital market activities, for example, foreign investment (Aggarwal, Kearney, & Lucey, 2012; Guiso, Sapienza, & Zingales, 2009; Levis, Muradoğlu, & Vasileva, 2016; Siegel, Licht, & Schwartz, 2011), mergers and acquisitions (Ahern, Daminelli, & Fracassi, 2015; Chakrabarti, Gupta-Mukherjee, & Jayaraman, 2009; Weber, Shenkar, & Raveh, 1996), capital structure (Chui, Lloyd, & Kwok, 2002; Gleason, Mathur, & Mathur, 2000; Li, Griffin, Yue, & Zhao, 2011), stock market participation, trading and momentum profits (Chui, Titman, & Wei, 2010; Grinblatt & Keloharju, 2001; Guiso, Sapienza, & Zingales, 2008), dividend policy (Bae, Chang, & Kang, 2012; Fidrmuc & Jacob, 2010; Javakhadze, Ferris, & Sen, 2014; Shao, Kwok, & Guedhami, 2010), executive compensation (Bryan, Nash, & Patel, 2015; Schuler & Rogovsky, 1998), accounting practices and accounting systems (Chand, Cummings, & Patel, 2012; Doupnik & Richter, 2003; Gray,

1988; Perera, 1989), and earnings quality (Doupnik, 2008; Han, Kang, Salter, & Yoo, 2010; Kanagaretnam et al., 2011; Nabar & Thai, 2007). In particular, some prior studies have provided evidence for the impact of cultural values on banking activities (e.g., Chircop et al., 2017; Kanagaretnam et al., 2011, 2014; Zheng et al., 2013). Our study furthers this line of research by showing that the national cultures of the foreign banks' countries of domicile play a significant role in the design of loan contract terms. Our findings suggest that culture matters even in the highly developed syndicated loan market with professional and experienced lenders.

This paper is most closely related to Chui, Kwok, and Zhou (2016), who examine how the national cultures of the borrowers' countries of domicile affect the cost of debt. A key feature that differentiates our study from theirs is that they focus on the borrowers' cultural values, while we examine those of the lenders. They argue that the borrowers' cultural values could affect the cost of debt through their impact on the borrowers' default risk and agency costs. In contrast, we propose that the lenders' cultural traits could affect the interest spreads that they charge by shaping the lenders' perceptions of risk and compensation. Another difference between our study and Chui et al. (2016) is that they perform a country-level analysis, while our analysis is at the loan level. By aggregating data into country-year observations, the type, purpose, and characteristics of the debt are not controlled for in their study. However, these factors are well recognized as important determinants of the cost of debt, giving rise to a concern for omitted correlated variables. In contrast, by adopting loan-level observations, our study is able to address the effect of debt characteristics. In addition, in Chui et al. (2016), both the borrowers and the lenders are from multiple countries, while in our paper, the lenders are from multiple countries, but all of the borrowers are from the U.S. By constraining the borrower firms to those from one country, we eliminate the variations in the borrowers' national cultures, legal environments, and market conditions.

Other studies that investigate the relationship between culture and debt contracting include Giannetti and Yafeh (2012) and Zhu and Cai (2014), who find that creditors impose less favorable contract terms on more culturally distant borrowers. Zheng, El Ghoul, Guedhami, and Kwok (2012) document a relationship between borrower firms' cultural scores and their debt maturity structures. He and Hu (2016) and Jiang, John, Li, and Qian (2018) provide evidence that U.S. borrowers located in counties with high levels of religiosity enjoy lower interest rates, larger loan amounts, and less intensive loan covenants. These studies focus on either how the culture difference between the borrower and the lender affects debt contracting through the information asymmetry channel or how the borrower's cultural background affects debt contracting through the default risk and agency costs channel. In contrast, our paper explores the role of the lender's cultural values. We expect the lender's incentives and subjective perceptions of risk and compensation to be deeply rooted in their cultural values. In particular, since foreign banks are short for soft information and prior lending relationships with local firms compared with their domestic counterparts, their subjective perceptions should play a particularly important role in the decision making.

The rest of this paper is organized as follows. Section 2 reviews the relevant literature and develops testable hypotheses. Section 3 describes the variables, methodology, and sample. Section 4 presents the empirical findings. Section 5 concludes the study.

2. Literature Review and Hypothesis Development

Embeddedness concerns desirable relationships between individuals and groups. Cultures with high embeddedness emphasize the person as embedded in the group and committed to maintaining the status quo, propriety, group solidarity, and traditional order (Licht et al., 2007; Schwartz, 1994). Chui et al. (2002) and Li et al. (2011) examine the impact of embeddedness on capital structure. They argue that firms in high embeddedness cultures use less debt because

these firms pursue harmonious relationships and are more concerned about the liquidation costs to their employees, suppliers, customers, and other stakeholders. High embeddedness also reduces the benefit of debt financing as a means for mitigating the agency conflict between shareholders and managers since the agency problem is less severe in high embeddedness societies, where people value group interests more than individual interests. In addition, public image is regarded as important in high embeddedness societies, and the use of debt incurs the risk of bankruptcy, which damages the firm's public image. These papers also conjecture that embeddedness-oriented cultures advocate for security and might regard the excessive use of debt as too risky. Shao et al. (2010) document a positive relation between embeddedness and dividend payouts. They argue that shareholders in high embeddedness countries prefer receiving cash dividends to accumulating retained earnings because cash dividends are "bird in hand" and more secure. Moreover, high dividend payouts play a positive signaling role of firm performance and satisfy the demand to preserve one's public image in high embeddedness countries. In addition, high dividend payouts reduce the agency problem between managers and shareholders and are therefore welcomed by high embeddedness cultures, which value harmonious group relationships. Chui et al. (2016) show that firms in high embeddedness countries enjoy a lower cost of debt. They explain this finding by the notion that the pursuit of security, public image, and group welfare in high embeddedness cultures decreases the borrower firms' default risk. In addition, the emphasis on harmonious group relationships also reduces agency conflicts between borrower firms and creditors.

Since the embeddedness culture places great importance on maintaining harmonious group relationships and calls for the sacrifice of individual interests to protect group interests, we expect foreign lenders from high embeddedness countries to be less aggressive in demanding high interest payments. In contrast, they are likely to be keener on fostering positive interactions and maintaining long-term relationships with borrower firms. Furthermore, since

the embeddedness culture stresses security, foreign banks from high embeddedness countries are likely to lend to less risky firms, leading to a negative correlation between the embeddedness scores of the foreign lenders' countries of domicile and the interest rates that they charge. Based on these arguments, we formulate the following testable hypothesis:

H1: Foreign lenders from higher embeddedness countries charge lower interest rates.

Mastery concerns the relationship between humankind and the natural and social world. Cultures with high mastery commit to actively modifying and exerting control over one's surroundings, rather than accepting the natural and social world as it is. In these cultures, attributes such as self-assertion and getting ahead of others are valued (Licht et al., 2007; Schwartz, 1994). Chui et al. (2002) and Li et al. (2011) find that high mastery values reduce the use of debt. They suggest that high mastery cultures encourage managers to demonstrate their abilities by pursuing aggressive business strategies, and in this case, the managers are reluctant to be bound by debt covenants and lender monitoring. Moreover, high mastery cultures emphasize individual success. Since the event of default can be viewed as a failure of management, managers in high mastery countries are likely to avoid the excessive use of debt, which increases firms' default risk. Shao et al. (2010) document a negative relationship between mastery and dividend payouts. They argue that managers from high mastery backgrounds like to maintain control, and by retaining cash in the company, they gain more flexibility and control over the business operations. In addition, the emphasis on success in high mastery societies also encourages managers to retain cash since internal cash is more efficient, economical, and timely than outside financing and can enhance a project's profitability. Chui et al. (2016) propose that the mastery scores of borrower firms' countries of domicile could have two opposing effects on their borrowing costs. On the one hand, managers

influenced by high mastery cultures would commit to achieving success and therefore avoiding the failure of bankruptcy. This commitment reduces the firms' cost of debt by decreasing the default risk. On the other hand, high mastery cultures encourage managers to demonstrate their abilities by investing in risky projects, leading to increased default risk. Chui et al. (2016)'s empirical findings are consistent with high mastery scores in the borrower firms' countries of domicile reducing the cost of debt.

Since high mastery cultures accentuate individual success, foreign lenders from high mastery countries are likely to impose higher interest rates to maximize profitability. However, higher interest rates increase default risk. To the extent that nonperforming loans are regarded as an indication of failure, bank managers in pursuit of success are likely to avoid overly burdening the borrower with high interest rates. In addition, foreign lenders with high mastery backgrounds are likely to believe in their own capabilities and be less sensitive to risk, reducing the compensation that they require for risk. Moreover, since high mastery cultures emphasize exerting control, foreign lenders from high mastery countries are expected to address risk actively with intensive screening and monitoring, instead of high interest rates. There is no a priori evidence indicating which effect of the mastery culture would dominate. We, therefore, treat the impact of the foreign lenders' mastery values on the interest rates that they charge as an empirical issue. Based on these arguments, we formulate the following testable hypothesis:

H2a (b): Foreign lenders from higher mastery countries charge higher (lower) interest rates.

3. Research Design

3.1 Schwartz's (1994) National Cultural Dimensions

Our study is closely related to Chui et al. (2016), who find an impact of borrower's national culture measured with Schwartz's (1994) dimensions on the cost of debt. Following Chui et al. (2016), we adopt the updated version of Schwartz's (1994) survey-based national cultural scores to capture the foreign lenders' cultural backgrounds.[1] The survey is participated in by more than 15,000 urban elementary school teachers from 55 countries. The focus of the survey on school teachers corresponds to schools and teachers playing a crucial role in upholding and conveying cultural values in a socialized process over generations. In addition, by focusing on a single profession, the respondents' characteristics, such as educational background, income, and age, are relatively consistent. This design also facilitates comparisons across countries (Licht et al., 2007; Siegel et al., 2011). Hofstede (2001, p. 8) regards Schwartz's survey as the ''most extensive research project on values so far". Moreover, Schwartz's survey was conducted in the early 1990s, which is closer to our sample period than other cultural surveys, for example, the Hofstede survey, which was conducted in the early 1970s.

Schwartz's cultural scores include seven value types, which are further condensed into two broad dimensions: (1) embeddedness vs. affective and intellectual autonomy; and (2) mastery and hierarchy vs. egalitarian commitment and harmony. Consistent with prior literature (Chui et al., 2016; Chui et al., 2002; Li et al., 2011; Shao et al., 2010), we focus on embeddedness and mastery because these two dimensions capture all seven value types.

3.2 Methodologies

We estimate the following regression to examine the relationship between the foreign lenders' national cultures and interest spreads:

[1] Data are downloaded from https://www.researchgate.net/publication/304715744_The_7_Schwartz_cultural_value_orientation_scores_for_80_countries.

$$\log(IntSpread_{i,t}) = \alpha_0 + \alpha_1 Embeddedness/Mastery_i + \alpha_2 \log(Firm\ Size_{i,t-1}) + \alpha_3 Leverage_{i,t-1} + \alpha_4 IntCov_{i,t-1} + \alpha_5 CurRatio_{i,t-1} + \alpha_6 Mar\ to\ Book_{i,t-1} + \alpha_7 Tangibility_{i,t-1} + \alpha_8 ROA_{i,t-1} + \alpha_9 \sigma(ROA)_{i,t-1} + \alpha_{10} Z-Score_{i,t-1} + \alpha_{11} MarCon\_US_{i,t} + \alpha_{12} \log(Maturity_{i,t}) + \alpha_{13} \log(Loan\ Size_{i,t}) + \alpha_{14} InstLoan_{i,t} + \alpha_{15} Revolver_{i,t} + \alpha_{16} PPP_{i,t} + \alpha_{17} LeadRep_{i,t} + \alpha_{18} PreRelation_{i,t} + \alpha_{19} \log(Lender\ No._{i,t}) + \alpha_{20} NonDollar_{i,t} + \alpha_{21} \log(GeoDist_{i,t}) + \alpha_{22} \log(GDP\ per\ capita_{i,t}) + \alpha_{23} GDP\ growth_{i,t} + \alpha_{24} PrvCredit_{i,t} + \alpha_{25} Inflation_{i,t} + Loan\ Purpose\ FE + Industry\ FE + Year\ FE + \varepsilon_{i,t} \quad (1)$$

where the dependent variable, *log(IntSpread$_{i,t}$)*, is the interest spread of loan i issued in year t measured as the annual spreads paid over LIBOR for each dollar drawn down from the loan.

The test variables are *Embeddedness* and *Mastery*. For each loan i, they are measured with Schwartz's (1994) culture scores of the foreign lead arrangers' countries of domicile.[2] For loans with multiple foreign lead arrangers domiciled in various countries, *Embeddedness* and *Mastery* are calculated as the average scores among those countries. We focus on the cultural values of the lead arrangers and disregard those of the participant lenders because the contract terms of syndicated loans are mainly negotiated and designed by the lead arrangers (Sufi, 2007). *Embeddedness* and *Mastery* are constant over time since cultural values change slowly, often over the course of centuries (Hofstede, 1980; Licht, Goldschmidt, & Schwartz, 2005).

[2] Following Giannetti and Yafeh (2012), we assign to the lead bank the culture scores of the country where its headquarter is located. Since syndicated loans typically are for large amounts, the decision rights on contract terms are often in the hands of senior staff in the banks' headquarters. Even when the loan contracts are written in local branches, they should follow the policies set by the headquarters. Moreover, the culture of the headquarters' country should affect the organizational culture of the branches.

Hypothesis H1 predicts a negative coefficient on *Embeddedness*, while hypothesis H2a (H2b) predicts a positive (negative) coefficient on *Mastery*.

We include a number of control variables commonly regarded as the determinants of loan spreads (Bharath, Dahiya, Saunders, & Srinivasan, 2011; Deng, Willis, & Xu, 2014; Ge, Kim, & Song, 2012; Graham et al., 2008; Hollander & Verriest, 2016; Valta, 2012). We first employ the natural logarithm of the borrower firm's total assets (*Log(Firm Size)*) to capture the borrower size. Smaller firms are more informationally opaque, less capable of accessing external financing, and more vulnerable to distress. We expect smaller firms to incur higher interest spreads. We also control for the borrower firm's performance, including solvency, liquidity, profitability, and volatility, using the firm's leverage ratio (*Leverage*), interest coverage ratio (*IntCov*), current ratio (*CurRatio*), return on assets (*ROA*), and earnings volatility ($\sigma(ROA)$). Firms with higher leverage ratios and earnings volatility and lower interest coverage ratios, current ratios, and return on assets are subject to a greater risk of default. We expect them to borrow with higher interest rates. The market-to-book ratio (*Mar to Book*) captures the additional value over book assets that debt holders can access in the event of default. Firms with higher market-to-book ratios should enjoy a lower interest charge. Tangible assets can be sold more easily than intangible assets to recover the loan in the event of default. We expect firms with greater tangibility (*Tangibility*) to have more favorable interest rates. Altman (1968) Z-score (*Z-score*) is adopted to address the borrower firm's distance from bankruptcy. Since a higher Z-score indicates a lower likelihood of bankruptcy, we predict a negative relationship between Z-score and loan pricing. These firm variables are all estimated at the end of the fiscal year immediately prior to loan initiation (year t-1).

In addition, we control for the market condition of the borrower country in the month of loan initiation (*MarCon_US*), measured with a principal component analysis combined metric based on three different macroeconomic factors: (1) the difference between the yields

on Moody's BAA and AAA-rated corporate bonds; (2) the difference between the yields on ten-year government securities and the three-month Treasury Bill; and (3) yields on three-month Treasury Bill. A higher value indicates worse market conditions. We anticipate a positive coefficient on *MarCon_US* in the interest spreads regression since the market-wide default risk increases in recessions.

Along with firm-specific characteristics, we also include a series of loan-specific variables in the regressions. First, we control for the natural logarithm of loan maturity (*Log(Maturity)*). Loans with longer maturities expose banks to firm financial conditions for longer periods; therefore, these loans should be charged with higher interest rates. We also control for the size of the loan, measured by the natural logarithm of the loan amount (*Log(Loan Size)*). We predict a negative relationship between loan size and interest spreads due to the economies-of-scale effect in lending (Berger & Udell, 1990). *InstLoan* is a dummy variable indicating whether the loan is funded by institutional investors. Institutional loans are typically extended to riskier borrowers. Thus, we expect them to have higher interest spreads than bank loans. *Revolver* is a dummy variable indicating whether the loan is a revolving loan. Andre, Mathieu, and Zhang (2001) provide evidence that banks bear a lower risk by issuing lines of credit than term loans. We, therefore, expect *Revolver* to be inversely related to interest spreads. Another dummy variable that we employ is *PPP*, which indicates whether the loan includes a performance pricing provision (PPP). Under PPPs, interest rates are directly tied to a prespecified measure of the borrower's credit quality. We expect the presence of PPPs to reduce interest rates since PPPs mitigate agency problems in lending (Asquith, Beatty, & Weber, 2005; Panyagometh, Roberts, Gottesman, & Beyhaghi, 2013) and play a signaling role (Manso, Strulovici, & Tchistyi, 2010). We further address the effect of the lead arranger's reputation by including a dummy variable, *LeadRep*, to capture whether the loan is arranged by one of the top 25 lead arrangers in the U.S. syndicated loan market, based on market share.

Prior literature has asserted that the reputation of the lead bank plays a certification role in the bank's screening and monitoring abilities, which brings down the adverse selection and moral hazard problems within the syndicate and in turn lowers the interest charge required by the participant lenders (Bushman & Wittenberg-Moerman, 2012; Chaudhry & Kleimeier, 2015; Do & Vu, 2010; Godlewski, Sanditov, & Burger‐Helmchen, 2012; Ross, 2010). *PreRelation* indicates whether the lead arranger of the loan has led the borrower's prior loans within the previous five-year period. Repeated lending, on the one hand, attenuates the information asymmetry between borrowers and lenders (Bharath, Dahiya, Saunders, & Srinivasan, 2007). On the other hand, it exacerbates the hold-up problem (Rajan, 1992; Sharpe, 1990). It is therefore uncertain what the net effect of prior lending relationships on interest rates would be. The natural logarithm of the number of lenders involved in a loan syndicate (*Log(Lender No.)*) is also included as a control variable. The larger the number is, the more spread out the risk is among the involved lenders. Hence, an inverse relationship between the number of lenders and interest spreads is anticipated. We include a dummy variable, *NonDollar,* to capture whether the loan is a dollar or non-dollar denominated loan. We don't have a prediction on the impact of this variable on the interest rate. The natural logarithm of geographical distance (*Log(GeoDist)*) between the borrower's headquarter and the foreign lead's headquarter in kilometers according to the Vincenty (sphere) method is included to capture the information asymmetry between the foreign lender and the borrower. According to sizable research (e.g., Agarwal & Hauswald, 2010; Coval & Moskowitz, 2001; Giannetti & Laeven, 2012), information risk increases with geographical distance. Hence, *Log(GeoDist)* should be positively related to interest spreads. All of the loan variables are estimated at loan initiation (year t).

Another set of control variables are related to the characteristics of the foreign lead arrangers' countries of domicile. We first address the effect of the economic environment using

the natural logarithm of GDP per Capita (*Log(GDP per Capita)*), annual GDP growth rate (*GDP Growth*), and inflation rate (*Inflation*). Prior literature (e.g., Giannetti & Laeven, 2012; Peek & Rosengren, 1997) has documented that foreign banks encountering economic turmoil in their home countries restrict their credits in host countries, exerting upward pressure on interest rates. We, therefore, expect *Log(GDP per Capita)* and *GDP Growth* to be negatively associated with and *Inflation* to be positively associated with interest spreads. We also control for credit market development, proxied by the ratio of private credit to GDP (*PrvCredit*) (Djankov, McLiesh, & Shleifer, 2007; Haselmann & Wachtel, 2011). We anticipate lenders from more developed credit markets to offer a lower interest charge. All of the above country variables are measured at loan initiation (year t). For loans with multiple foreign lead arrangers domiciled in various countries, we use the average value among these countries.

Finally, we control for loan purpose fixed effects based on seven categories of primary loan purposes, namely acquisition lines, LBO/MBO/SBO, takeover, debt repayment/ recapitalization, corporate purpose, working capital, and other purposes. We also control for year fixed effects and industry fixed effects using the 2-digit SIC code. A more detailed description of the definition and measurement of variables is presented in Table 1.

[Insert Table 1]

3.3 Sample and Data

Our sample selection starts with all dollar and non-dollar denominated loans issued to U.S. companies by foreign lead lenders[3] recorded in the Thomson Reuters LPC DealScan Database between Jan 1996-Dec 2017. Our sample starts from 1996 because the data collection for the

[3] We require all the lead arrangers of our sample loans to be foreign banks since lenders with identical cultures can have different perceptions of risk and compensation when they lend to domestic, as opposed to foreign, firms. This issue could not be solved by controlling for the percentage of domestic lead arrangers in the lender group since the percentage of domestic lead arrangers can exert a non-linear effect on the whole lender group's perception of risk and compensation.

DealScan Database commenced in 1996. The loan information for the previous years (1985-1995) was recorded retroactively, so the data coverage for that period might be incomplete. The financial information of the borrower firm is obtained from Compustat. Loan variables are matched with firm variables using the link file provided by Chava and Roberts (2008) and updated in 2018. We further exclude loans issued to financial (SIC code 6000-6999) and regulated (SIC code 4400-4999) firms. Finally, we exclude loans with missing data on the variables used in the main regressions. The final sample consists of 1,221 loans issued to 475 companies by foreign lenders from 24 countries. The number of observations in different tests might vary with the data availability of the variables used in the test. The sample selection procedure is described in Table 2.

[Insert Table 2]

Table 3 presents the sample distribution by lender country (Panel A), borrower industry (Panel B), and loan issuance year (Panel C). In Panel A, the sum of the number of loans for all countries exceeds the total number of loans in our sample because a few loans involve multiple lead arrangers domiciled in different countries. The foreign lead arrangers in our sample come from a total of 24 countries. The countries contributing more than 100 loans are Canada, France, Switzerland, the Netherlands, Germany, and the United Kingdom. Panel B shows the distribution of sample loans based on the industries of borrower firms. The industries represented most frequently are durable goods manufacturing, nondurable goods manufacturing, mining, and services. Panel C reports the yearly distribution of sample loans. The number of loans experienced a sharp decrease between 1999-2001 after the Asian financial crisis. It recovered from 2002 but decreased again in 2008 when the subprime mortgage crisis struck the U.S. The number remained consistently low afterward, possibly due to the prolonged effects of the 2008 financial crisis and the subsequent European sovereign debt crisis. This

pattern of distribution reveals that the supply of foreign credits is affected by the economic situations in both the foreign lender's home country and the host country.

[Insert Table 3]

4. Empirical Findings

4.1 Summary Statistics and Correlation Analysis

Table 4 reports the summary statistics of the variables used in our main tests. The mean (median) values of the foreign lender culture variables, i.e., *Embeddedness* and *Master*, are 3.335 (3.355) and 3.803 (3.801), respectively.

In Table 4, we also compare the firm and loan characteristics between our test sample and a comparison sample, which applies the same selection criteria as the test sample except that the lead arrangers are all domestic, instead of foreign, banks. The comparison reveals that the firms seeking funding from foreign creditors are with poorer performance. For example, the leverage ratio is significantly higher (mean = 0.289 in our test sample vs. mean = 0.244 in the comparison sample); the interest coverage ratio is significantly lower (mean = 17.226 in our test sample vs. mean = 23.362 in the comparison sample); the ROA is also significantly lower (mean = 0.020 in our test sample vs. mean = 0.036 in the comparison sample); and the ROA volatility is significantly higher (mean = 0.059 in our test sample vs. mean = 0.046 in the comparison sample). These findings are consistent with the conclusion in Haselmann and Wachtel (2011) that, despite the consensus in the literature based on less-developed economies that foreign creditors prefer choosing larger and better performing borrower firms compared with their domestic counterparts, the foreign creditors in developed markets, in contrast, tend to lend to riskier firms.

The contract terms of our sample loans are generally less favorable than those of the compared loans, which might be due to: (1) the borrower firms being riskier in our test sample;

and (2) the foreign lenders using more restrictive terms to protect themselves against greater information asymmetry. For example, the interest spreads are significantly higher in our test sample (mean = 213.800) than in the comparison sample (mean = 187.750); the covenants are significantly more intensive (mean = 4.764 for *Cov* in our test sample vs. mean = 4.555 for *Cov* in the comparison sample); and the amount of the loan is significantly smaller (mean = $236.723 million in our test sample vs. mean = $298.274 million in the comparison sample). Notably, in our test sample with foreign lead arrangers, 42.5% of loans are led by relationship banks, while in the comparison sample with domestic lead arrangers, 49.4% of loans are led by relationship banks. This observation is consistent with the argument in the literature that foreign lenders are less likely to have prior lending relationships with local firms, exacerbating their information risk (Buch, 2003; Haselmann & Wachtel, 2011; Mian, 2003, 2006; Petersen & Rajan, 2002; Vu et al., 2015). 3.5% of loans in our test sample are non-dollar denominated, compared with 0.8% in the comparison sample. The average distance between lenders and borrowers is 8,979.382 km in our test sample, compared with 1,386.060 km in the comparison sample.

Regarding the country variables in our test sample, the mean (median) of GDP per Capita for the foreign lead arrangers' countries of domicile is $38,250.038 ($37,529.395). The mean (median) of GDP growth is 3.300% (3.000%); the mean (median) of inflation is 1.498% (1.358%); and the mean (median) of private credit to GDP is 111.264% (109.484%).

[Insert Table 4]

Table 5 provides the Pearson correlation matrix for the variables in the main tests. The correlation coefficient between the two culture variables, i.e., *Embeddedness* and *Mastery*, is as high as 0.837 and statistically significant at the 1% level. Therefore, to avoid the multicollinearity problem, we do not include these two variables in the same regression in the

subsequent multivariate analyses. The correlations between *Embeddedness* and *Log(IntSpread)* and between *Mastery* and *Log(IntSpread)* are both negative and significant at the 1% level, providing preliminary support for hypotheses H1 and H2b. Regarding the control variables, *Log(Firm Size), IntCov, Mar to Book, ROA, Z-Score, Log(Loan Size), Revolver, PPP, Log(Lender No.), NonDollar,* and *GDP Growth* are significantly negatively associated with *Log(IntSpread),* and *Leverage, σ(ROA), MarCon_US, Log(Maturity), InstLoan, Log(GeoDist), Log(GDP per Capita),* and *PrvCredit* are significantly positively associated with *Log(IntSpread)*.

[Insert Table 5]

4.2 The Impact of Foreign Lenders' National Cultures on Interest Spreads

Table 6 presents the estimation results of the impact of foreign lenders' national cultures on interest rates. The first two columns do not include the control variables on lender country characteristics, whereas the last two include them. In Column 1, we document a significantly negative coefficient on *Embeddedness* (coef. = -0.310, t-stat. = -2.77), consistent with hypothesis H1. Column 2 shows a significantly negative coefficient on *Mastery* (coef. = -0.414, t-stat. = -2.53), lending support to hypothesis H2b. When we include the country-specific control variables in Columns 3 and 4, the significantly negative relations between *Embeddedness* and *Log(IntSpread)* and between *Mastery* and *Log(IntSpread)* continue to hold (coef. = -0.396, t-stat. = -3.46; coef. = -0.475, t-stat. = -2.95, respectively).

With respect to the control variables, the results show that smaller firms with lower market to book ratios and ROA and higher leverage are subject to higher interest spreads. We document significantly positive coefficients on *Log(Maturity)* and significantly negative coefficients on *Log(Loan Size)*. Institutional loans incur higher costs while revolving loans are less costly. The presence of PPP is significantly inversely associated with interest spreads. We

also find some evidence that non-dollar denominated loans have lower interest rates. Finally, the interest rate is higher if the foreign lenders' home countries have higher inflations. The above findings are all consistent with our predictions, as discussed in Section 3.2. The coefficients on other control variables are insignificant in our regressions.

Collectively, the findings in Table 6 indicate that foreign lenders domiciled in countries that prioritize harmonious group relationships, group interests, security, and public image tend to offer more favorable interest rates. The interest charge is also lower if the foreign lenders are domiciled in countries that promote active self-assertion to master, change, and exploit the natural and social environment. These effects are incremental to a wide range of borrower, loan, and lender country-specific variables that capture the default risk and information risk. Our findings provide evidence in support of the role of culture in cross-border lending. In particular, the foreign lenders' values and beliefs stemming from their national cultures may play an indispensable role in setting the interest rate.

[Insert Table 6]

4.3 Robustness Tests

Exclude loans with multiple leads

A syndicated loan can include multiple lead arrangers domiciled in different countries. There is a possibility that these lead arrangers have diametrically opposite culture scores, which in turn could affect our results. To address this issue, we exclude loans with multiple lead arrangers from our sample. Of 1,221 loans, 151 are removed in this robustness test. As reported in Table 7, Panel A, our previous finding that the foreign lenders from high embeddedness and mastery countries offer lower interest rates remains unchanged.

Correct sample selection bias

In our main tests, we restrict our sample to loans arranged by foreign banks. However, the choice of having foreign, instead of domestic, lead arrangers is nonrandom. Some unobservable factors driving this choice can also affect the interest rate, exposing our main tests to an omitted correlated variable problem. We adopt the Heckman (1979) two-stage procedure to mitigate this selection issue. In the first stage, we estimate a selection model that explains the choice of having foreign, instead of domestic, lead arrangers and calculate the inverse Mills ratio (*IMR*). The exclusion restriction we use is the median foreign lead percentage of all loans issued to U.S. borrowers in the same industry and year with the current loan, excluding the current loan from calculating the median. Foreign lead percentage is calculated as the number of foreign lead lenders divided by the total number of lead lenders. Because our regressions explicitly control for industry and year fixed effects, we do not expect the industry year median foreign lead percentage to directly affect the interest rate of the current loan (Hollander & Verriest, 2016; Lee, Pappas, & Xu, 2020).

In the second stage, we include *IMR* in Eq. (1) as an additional explanatory variable to correct for the potential sample selection bias. The results for the second-stage regression are presented in Table 7, Panel B. The coefficients on *Embeddedness* and *Mastery* continue to be negative and significant at the 1% level, confirming that our previous inferences are not affected by the sample selection issue. The coefficients on *IMR* are significantly negative in both columns, suggesting that sample selection bias exists in our main tests.

2SLS Analysis

There is a concern that our culture variables are correlated with some unobserved variables which are also correlated with the interest rate, leading to a spurious relation between the culture variables and the interest rate. To address this concern, we adopt an instrumental variable approach using a two-stage least squares (2SLS) regression analysis.

The instrument we use for *Embeddedness* is Murray and Schaller's (2010) overall index of the historical prevalence of infectious diseases across geopolitical regions. Pathogen prevalence is a standard instrument for Hofstede's individualism in culture-finance research (e.g., Boubakri & Saffar, 2016; Gaganis, Hasan, & Pasiouras, 2020; Zheng et al., 2013). Since embeddedness and individualism are closely related, we also use the pathogen prevalence as an instrument for *Embeddedness*. Fincher, Thornhill, Murray, and Schaller (2008) suggest that individuals of collectivist cultures are more wary of contact with outgroup members (strangers) and are less likely to eat unusual foods. Therefore, collectivism serves as a defense against the spread of disease and is more likely to emerge in societies that historically suffered a greater prevalence of pathogens.

Following Gaganis et al. (2020), the instrument for *Mastery* we adopt is agricultural potential. Hansen, Jensen, and Skovsgaard (2015) suggest that societies with long histories of agriculture have higher mastery scores. Agricultural potential is measured by the maximum potential caloric yield attainable given the set of crops that were suitable for cultivation in the pre-1500 period. The data are from Galor and Özak (2016) and the raw figures are divided by 1,000,000 to be expressed in millions.

Prior studies (e.g., Chui et al., 2016; Licht et al., 2007; Shao, Kwok, & Zhang, 2013; Tang & Koveos, 2008) also use "pronoun drop", which indicates whether the subject of a sentence can be dropped, to instrument for various cultural dimensions, because this grammatical feature of languages appears to be correlated with various cultural aspects (Kashima & Kashima, 1998). We also use pronoun drop as the second instrument for both *Embeddedness* and *Mastery*.

At the same time, the historical prevalence of pathogens, agricultural potential, and grammatical features of languages of the foreign lenders' countries of domicile are unlikely to

have a direct impact on the interest rate they charge on a particular loan, satisfying the exogeneity requirement of instruments.

The unreported results of the first stage regressions show that the coefficients on instruments are all statistically significant at the 1% level in both the *Embeddedness* and the *Mastery* models. The second stage regressions presented in Table 7, Panel C show that the fitted values of *Embeddedness* and *Mastery* both remain significantly negatively related to interest rate, alleviating the concern that endogeneity is behind our main findings. The Cragg-Donald Wald F-statistic well exceeds the critical value reported by Stock and Yogo (2005) in each model, confirming that our instruments are relevant. The Kleibergen-Paap rk LM statistic, which is another test of relevance, also confirms that our instruments are relevant.

[Insert Table 7]

Additional control variables

To address the concern of omitted correlated variables, we also include additional control variables in the regression. First, we consider the effect of the legal environment of the foreign lead arrangers' countries of domicile, proxied by the creditor rights and legal enforcement (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998). The legal environment of a country is correlated with the national culture of the country (Licht et al., 2007). Although the legal environment in the lender country is unlikely to affect loan pricing directly since creditor rights are normally determined by the laws in the borrower country, and the enforcement of contracts relies on the courts of the borrower country, the judicial risk of the lender country can influence the foreign lenders' design of loan contracts by building their risk attitudes. We repeat the main tests with *Creditor Rights* and *Legal Enforcement* as additional control variables and report the results in Table 8, Columns (1) and (2). The coefficients on *Embeddedness* and *Mastery* are both significantly negative, similar to those in the main tests, suggesting that the effect of

informal institutions on interest rates is incremental to that of formal institutions. Moreover, we do not document a significant impact of *Creditor Rights* and *Legal Enforcement* on interest rate.

Second, we add a set of control variables that capture the economic and political conditions of the foreign lenders' countries of domicile, namely trade openness (*Trade Openness*), control of corruption (*CtrofCorr*), market capitalization (*MCAP*), and whether the country is undergoing a systematically important banking crisis (*SysBankCrises*). Table 8, Columns (3) and (4) show that the coefficients on *Embeddedness* and *Mastery* remain significantly negative after including additional foreign lender country controls. The results on these additional foreign lender country controls reveal that foreign lenders from countries with lower corruptions and countries undergoing systematically important banking crises charge higher interest spreads. Trade openness and market capitalization do not exhibit any significant impact on interest spreads.

Finally, we add some lender-specific controls, namely *Lender Size*, *Lender ROA*, and *Lender Leverage*. Data on lender controls are collected from Compustat Bank and Compustat Global. We identify the Compustat GVKEYs for the foreign banks in our sample based on the DealScan lenders-Compustat link table in Schwert (2018). For lenders not included in the link table, we manually match them to Compustat following the procedure described in Schwert (2018). We take mergers and acquisitions into account based on information from SNL Financial, and acquired firms are aggregated to their acquirers at the effective date of the merger. In Table 8, Columns (5) and (6), the coefficient on *Embeddedness* is still negative and significant at the 1% level. Notably, the magnitude of this coefficient becomes twice as large as that in the main test (-0.749 vs. -0.396). The coefficient on *Mastery* is negative and marginally significant. Regarding the additional lender controls, we find that larger banks offer

lower interest rates. The coefficients on *Lender ROA* and *Lender Leverage* are either insignificant or inconsistent in different regressions.

[Insert Table 8]

Alternative culture measures

We also test the sensitivity of our results to alternative culture measures. Specifically, we replace Schwartz's (1994) cultural dimensions with alternative measures that capture conceptually similar cultural aspects. First, we use Hofstede's (1980) cultural values *Individualism* and *Masculinity* to replace *Embeddedness* and *Mastery* respectively. Hofstede's (1980) cultural values are empirically validated and widely acknowledged in Socio-financial research. [4] Hofstede's *Individualism* and Schwartz's *Embeddedness* both deal with the relationship between the individual and the group. *Individualism* is negatively related to *Embeddedness* (Schwartz, 2004). There is also some degree of conceptual convergence between Hofstede's *Masculinity* and Schwartz's *Mastery*, since both of them refer to the tendency to assertively try to control the social and natural world (Schwartz, 2004). Table 9, Panel A shows that foreign lenders from higher individualism cultures charge higher interest rates, whereas masculinity doesn't show any significant impact on interest rate.

The second set of alternative culture measures are drawn from the Inglehart's World Values Survey (WVS) (Inglehart, 1997; Inglehart, Basanez, & Moreno, 1998; Inglehart & Welzel, 2005). Inglehart classifies culture into two dimensions, survival versus self-expression values (*Survival*) and traditional versus secular–rational values (*Traditional*). Although Inglehart focuses on the social and political aspect while Schwartz focuses on the psychological aspect of culture, Inglehart's cultural dimensions can be seen as two expressions of the more

[4] See Kirkman, Lowe, and Gibson (2006) for a comprehensive survey of research using Hofstede's cultural values.

fundamental and abstract Schwartz's *Embeddedness* (Dobewall & Rudnev, 2014). Specifically, high *Survival* culture stress material values above other goals such as economic and physical security, trust, and responsibility; and high *Traditional* culture attaches great importance to traditional authority (especially religious authority), family and communal obligations, and norms of sharing. Therefore, *Survival* should be negatively related to *Embeddedness*; and *Traditional* should be positively related to *Embeddedness*. Schwartz's *Mastery* is not captured by *Survival* or *Traditional*. Table 9, Panel B reports that foreign lenders from higher *Survival* cultures charge higher interest rates, whereas *Traditional* doesn't reveal any significant impact on interest rate.

Finally, we use the Global Leadership and Organizational Behavior Effectiveness (GLOBE) cultural dimensions to replace *Embeddedness* and *Mastery*. The GLOBE project is a large-scale study of organizational leadership in a cultural context (House, Hanges, Javidan, Dorfman, & Gupta, 2004). Among the nine cultural dimensions developed by GLOBE, *In-group Collectivism*, which evaluates the extent to which members of a society express pride, loyalty, and cohesiveness in their groups, organizations, or families, conceptually coincides with Schwartz's *Embeddedness*; and *Assertiveness*, which measures the degree to which individuals in societies are assertive, confrontational, aggressive, and straightforward, is consistent with Schwartz's *Mastery*. In Table 9, Panel C, we replace *Embeddedness* with *In-group Collectivism* and replace *Mastery* with *Assertiveness*, respectively. We re-estimate Equation (1) and find significantly negative coefficients on both *In-group Collectivism* and *Assertiveness*.

In general, the results in Table 9 suggest that our main findings are insensitive to alternative culture measures. Using alternative measures for the extent to which individuals in a certain society (1) are embedded in groups and (2) actively seek to master and change the world, we still find some impact of these two cultural dimensions on interest spreads. All three

alternative measures for embeddedness confirm a negative effect of embeddedness on interest spreads while one out the three alternative measures for mastery supports a negative relation between mastery and interest rate.

[Insert Table 9]

4.4 Conditional Tests

Information asymmetry

We perform a conditional test based on the information asymmetry between the foreign lenders and the borrower. If the foreign lenders possess sufficient information about the borrower, they are more likely to form objective judgments based on the information they acquire and less likely to be affected by subjective perceptions. Therefore, we expect the impact of foreign lenders' national cultures on interest rate to be less pronounced when the information asymmetry between the foreign lenders and the borrower is lower.

To test this prediction, we partition the sample based on information asymmetry, estimate Equation (1) separately using each subsample, and compare the results of the culture variables across the different subsamples using an F-test. We adopt three proxies to capture the information asymmetry: the presence of prior lending relationships between the foreign lenders and the borrower in the previous five-year period (*PreRelation*), the borrower's information environment measured by the analysts' forecast dispersion on the borrower (*Forecast Dispersion*), and the geographical distance between the foreign lenders and the borrower (*GeoDist*). Lenders with prior lending relationships with the borrower firm (*PreRelation* = 1) should possess more information about the firm than new lenders (Bharath et al., 2007). A borrower with lower analysts' forecast dispersion (*Forecast Dispersion* < sample median *Forecast Dispersion*) should be more transparent (Abarbanell, Lanen, & Verrecchia, 1995; Barron, Kim, Lim, & Stevens, 1998). Geographically proximate lenders (*GeoDist* < sample

median *GeoDist*) are more capable of collecting information on the borrower than remote lenders (Giannetti & Laeven, 2012; Hollander & Verriest, 2016; Petersen & Rajan, 2002).

Table 10 provides the conditional test results. We find that the negative impacts of *Embeddedness* and *Mastery* on interest rate are attenuated in the *PreRelation* = 1, low *Forecast Dispersion*, and low *GeoDist* subsamples. The p-values of the F-tests indicate that the differences in coefficients on *Embeddedness* and *Mastery* between the low vs. high subsamples are all statistically significant with each of the three conditional variables. These findings support the prediction that the impact of culture variables on interest rate is weakened when the information asymmetry between the foreign lenders and the borrower is lower.

[Insert Table 10]

Foreign lender bargaining power

Loan contracts are negotiated between lenders and borrowers and the resulting contract terms should reflect the relative bargaining power of each party (LSTA, 2007; Sufi, 2007). When the lenders possess more initiative in the negotiation, their values and beliefs stemming from national cultures should be more capable of influencing the negotiation outcomes. Therefore, we expect the impact of foreign lenders' national cultures on interest rate to be more noticeable when the lenders possess greater bargaining power.

To test this prediction, we partition the sample based on foreign lender bargaining power, estimate Equation (1) separately using each subsample, and compare the results of the culture variables across the different subsamples using an F-test. We proxy for the foreign lenders' bargaining power using three variables: the borrower's financial constraints measured with the Whited and Wu (2006) index (*Fin Constraints*), the U.S. Lerner index, which is a reverse measure of banking competition in the U.S. (*Lerner_US*), and the market condition in the U.S. (*MarCon_US*). The foreign lenders should acquire greater bargaining power when the

borrower is under more financial constraints (*Fin Constraints* > sample median *Fin Constraints*) (Campello, Graham, & Harvey, 2010), when the banking market is less competitive in the host country (*Lerner_US* > sample median *Lerner_US*) (Hainz, Weill, & Godlewski, 2013; Lian, 2018), and when the host country is experiencing an economic downturn (*MarCon_US* > sample median *MarCon_US*) (Giannetti & Laeven, 2012; Houston, Itzkowitz, & Naranjo, 2017).

Table 11 provides the conditional test results. We find that the negative impacts of *Embeddedness* and *Mastery* on interest rate are strengthened in the high *Fin Constraints*, high *Lerner_US*, and high *MarCon_US* subsamples. The differences in coefficients on *Embeddedness* and *Mastery* between the low vs. high subsamples are mostly statistically significant with all three conditional variables based on the p-values of the F-tests.[5] These findings are consistent with the prediction that the impact of culture variables on interest rate is more pronounced when the foreign lenders possess greater bargaining power.

[Insert Table 11]

4.5 The Impact of Foreign Lenders' National Cultures on Covenant Intensity

In this additional test, we examine the impact of foreign lenders' national cultures on covenant intensity. We apply three measures to capture the covenant intensity: (1) the total number of covenants included in a loan contract (*Cov*); (2) a covenant index based on Bradley and Roberts (2015), which considers the presence of both financial and certain general covenants -- specifically, the index assigns one point (maximum of six) if any of the following covenants exists in a loan: security provision, dividend restriction, more than two restrictions on financial

[5] The only exception is with the difference in coefficients on *Mastery* between the low *Lerner_US* and high *Lerner_US* subsamples. The magnitude of coefficient and the absolute value of t-statistic are higher in the high *Lerner_US* subsample (coef. = -1.132, t-stat. = -4.74) than in the low *Lerner_US* subsample (coef. = -0.654, t-stat. = -2.21), but the F-test suggests that the difference is insignificant (p-value = 0.243).

ratios, asset sweep, debt sweep, and equity sweep (*Cov_BR*); and (3) another covenant index based on Fields, Fraser, and Subrahmanyam (2012), which is similar to the Bradley and Roberts (2015) index. Specifically, the index assigns one point (maximum of three) if any of the following covenant categories exists in a loan: security provisions, more than two restrictions on financial ratios, and whether the loan covenants include asset, debt, and/or equity sweeps (*Cov_FFS*). We regress each covenant intensity measure on the same set of explanatory variables as in Eq. (1). Since the covenant intensity variables are all count variables, we adopt Poisson regressions.

The results are presented in Table 12. In Columns 1 and 2, the dependent variable is *Cov*. The coefficient on *Embeddedness* is negative and significant at the 5% level. The coefficient on *Mastery* is also negative and marginally significant. The results in Columns 3 and 4, where the dependent variable is *Cov_BR*, and in Columns 5 and 6, where the dependent variable is *Cov_FFS,* are similar to those in the first two columns. These findings provide some evidence that foreign lenders from countries with higher embeddedness and mastery scores impose less intensive covenants.

With respect to the control variables, the results show that smaller firms with higher leverage ratios are subject to more restrictive covenants. We find significantly negative coefficients on *Mar to Book* when the dependent variable is *Cov_BR*/*Cov_FFS*, consistent with the finding in prior studies that firms with more growth potentials are less willing to be constrained by debt covenants (Kahan & Yermack, 1998; Reisel, 2014). Institutional loans have tighter covenants. The presence of PPP is also positively associated with the intensity of covenants, consistent with the notion that PPPs complement, rather than substitute, covenants (Chan et al., 2013; Costello & Wittenberg-Moerman, 2011; Graham et al., 2008; Kim, Song, & Zhang, 2011). We expect the number of lenders in a loan to be negatively associated with the covenant intensity since the cost of renegotiation increases in the number of lenders

involved as a result of the coordination problems (Bolton & Scharfstein, 1996; Gilson, John, & Lang, 1990). However, we document an opposite result. The positive coefficients on *Log(Lender No.)* might be caused by a confounding effect that better quality loans being able to attract more lenders to join the syndicate. In addition, lenders located further from the borrower rely more on restrictive covenants to monitor the borrower. Finally, we document some weak evidence that lenders domiciled in countries with higher GDP growth, private credit to GDP, and inflation impose more restrictive covenants.

[Insert Table 12]

5. Conclusion

This study examines the link between the national cultures of foreign banks' countries of domicile and the pricing of syndicated loans. Using Schwartz's (1994) cultural dimensions to proxy for national culture, we find that a high embeddedness value, which emphasizes harmonious group relationships, group interests, security, and public image, decreases foreign lenders' demands on interest rates. Moreover, foreign lenders rooted in high mastery cultures, which stress individual success, capability, and taking control, also charge lower interest spreads. These results are robust to a battery of robustness tests and incremental to the effects of the formal institutions of the foreign lenders' countries of domicile. We also document that greater information asymmetry and foreign lenders' bargaining powers strengthen the impact of foreign lenders' national cultures on interest rates. Finally, in an additional analysis, we provide evidence that the intensity of loan covenants is also negatively related to the embeddedness and mastery scores of the foreign lenders' countries of domicile.

These findings provide new insight into the culture-debt contracting literature. Prior studies (Chui et al., 2016; He & Hu, 2016; Jiang et al., 2018) document that the borrowers' cultures affect their creditworthiness and agency issues, and therefore exert an impact on their

cost of borrowing. Different from these studies, we focus on the lenders' cultures. After holding the borrowers' national cultures constant, we find a relation between the lenders' national cultures and interest rates in a cross-border lending setting. This relation is possibly attributable to the lenders' subjective assertions of values and beliefs shaped by their national cultures.

Our study also offers some practical implications for market participants. First, firms seeking funds from foreign lenders domiciled in countries with low embeddedness or mastery scores are more likely to be charged higher interest rates. Firms should be aware of this cultural impact when choosing creditors. If they must approach banks from a less group-oriented or self-assertion culture, they should exert efforts to mitigate the culture's adverse effects, e.g., by improving the information quality. Second, firms should match their economic conditions with the banks' cultural backgrounds when choosing creditors. For example, firms with high growth potential might want to maintain their flexibility in making investment decisions and avoid excessive creditor interventions. These firms are reluctant to form intensive covenants, which can lead to covenant violations and transfers of control rights to creditors. Banks from high embeddedness and high mastery countries would, therefore, suit these firms better since they are less likely to impose intensive covenants. Overall, this study underscores the indispensable role of lenders' cultural backgrounds in cross-border lending and points out some interesting future research avenues, such as how other behavioral aspects of lender characteristics would affect the setting of debt contract terms.

References

Abarbanell, J. S., Lanen, W. N., & Verrecchia, R. E. (1995). Analysts' forecasts as proxies for investor beliefs in empirical research. *Journal of Accounting and Economics, 20*(1), 31-60.

Agarwal, S., & Hauswald, R. (2010). Distance and private information in lending. *The Review of Financial Studies, 23*(7), 2757-2788.

Aggarwal, R., Kearney, C., & Lucey, B. (2012). Gravity and culture in foreign portfolio investment. *Journal of Banking & Finance, 36*(2), 525-538.

Ahern, K. R., Daminelli, D., & Fracassi, C. (2015). Lost in translation? The effect of cultural values on mergers around the world. *Journal of Financial Economics, 117*(1), 165-189.

Altman, E. I. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *The Journal of Finance, 23*(4), 589-609.

Andre, P., Mathieu, R., & Zhang, P. (2001). A note on: Capital adequacy and the information content of term loans and lines of credit. *Journal of Banking & Finance, 25*(2), 431-444.

Ashraf, B. N., Zheng, C., & Arshad, S. (2016). Effects of national culture on bank risk-taking behavior. *Research in International Business and Finance, 37*, 309-326.

Asquith, P., Beatty, A., & Weber, J. (2005). Performance pricing in bank debt contracts. *Journal of Accounting and Economics, 40*(1-3), 101-128.

Bae, K. H., & Goyal, V. K. (2009). Creditor rights, enforcement, and bank loans. *The Journal of Finance, 64*(2), 823-860.

Bae, S. C., Chang, K., & Kang, E. (2012). Culture, corporate governance, and dividend policy: International evidence. *Journal of Financial Research, 35*(2), 289-316.

Ball, R., Bushman, R. M., & Vasvari, F. P. (2008). The debt-contracting value of accounting information and loan syndicate structure. *Journal of Accounting Research, 46*(2), 247-287.

Barron, O. E., Kim, O., Lim, S. C., & Stevens, D. E. (1998). Using Analysts' Forecasts to Measure Properties of Analysts' Information Environment. *The Accounting Review, 73*(4), 421-433.

Berger, A. N., & Udell, G. F. (1990). Collateral, loan quality and bank risk. *Journal of Monetary Economics, 25*(1), 21-42.

Berkowitz, D., Pistor, K., & Richard, J.-F. (2003). Economic development, legality, and the transplant effect. *European Economic Review, 47*(1), 165-195.

Bharath, S., Dahiya, S., Saunders, A., & Srinivasan, A. (2007). So what do I get? The bank's view of lending relationships. *Journal of Financial Economics, 85*(2), 368-419.

Bharath, S. T., Dahiya, S., Saunders, A., & Srinivasan, A. (2011). Lending relationships and loan contract terms. *The Review of Financial Studies, 24*(4), 1141-1203.

Bolton, P., & Scharfstein, D. S. (1996). Optimal debt structure and the number of creditors. *Journal of Political Economy, 104*(1), 1-25.

Bord, V. M., & Santos, J. A. (2014). Banks' liquidity and the cost of liquidity to corporations. *Journal of Money, Credit and Banking, 46*(s1), 13-45.

Boubakri, N., & Saffar, W. (2016). Culture and externally financed firm growth. *Journal of Corporate Finance, 41*, 502-520.

Bradley, M., & Roberts, M. R. (2015). The structure and pricing of corporate debt covenants. *The Quarterly Journal of Finance, 5*(2), 1-37.

Bryan, S., Nash, R., & Patel, A. (2015). The effect of cultural distance on contracting decisions: The case of executive compensation. *Journal of Corporate Finance, 33*, 180-195.

Buch, C. M. (2003). Information or regulation: What drives the international activities of commercial banks? *Journal of Money, Credit & Banking, 35*(6), 851-869.

Bushman, R. M., Hendricks, B. E., & Williams, C. D. (2016). Bank competition: Measurement, decision-making, and risk-taking. *Journal of Accounting Research, 54*(3), 777-826.

Bushman, R. M., & Wittenberg-Moerman, R. (2012). The role of bank reputation in "certifying" future performance implications of borrowers' accounting numbers. *Journal of Accounting Research, 50*(4), 883-930.

Campello, M., Graham, J. R., & Harvey, C. R. (2010). The real effects of financial constraints: Evidence from a financial crisis. *Journal of Financial Economics, 97*(3), 470-487.

Carretta, A., Farina, V., Fiordelisi, F., Schwizer, P., & Lopes, F. S. S. (2015). Don't stand so close to me: The role of supervisory style in banking stability. *Journal of Banking & Finance, 52*, 180-188.

Chakrabarti, R., Gupta-Mukherjee, S., & Jayaraman, N. (2009). Mars–Venus marriages: Culture and cross-border M&A. *Journal of International Business Studies, 40*(2), 216-236.

Champagne, C., & Kryzanowski, L. (2007). Are current syndicated loan alliances related to past alliances? *Journal of Banking & Finance, 31*(10), 3145-3161.

Chan, L. H., Chen, K. C., & Chen, T.-Y. (2013). The effects of firm-initiated clawback provisions on bank loan contracting. *Journal of Financial Economics, 110*(3), 659-679.

Chand, P., Cummings, L., & Patel, C. (2012). The effect of accounting education and national culture on accounting judgments: A comparative study of Anglo-Celtic and Chinese culture. *European Accounting Review, 21*(1), 153-182.

Chaudhry, S. M., & Kleimeier, S. (2015). Lead arranger reputation and the structure of loan syndicates. *Journal of International Financial Markets, Institutions and Money, 38*, 116-126.

Chava, S., & Roberts, M. R. (2008). How does financing impact investment? The role of debt covenants. *The Journal of Finance, 63*(5), 2085-2121.

Chircop, J., Fabrizi, M., Ipino, E., & Parbonetti, A. (2017). Does branch religiosity influence bank risk-taking? *Journal of Business Finance & Accounting, 44*(1-2), 271-294.

Chui, A. C. W., Kwok, C. C. Y., & Zhou, G. (2016). National culture and the cost of debt. *Journal of Banking & Finance, 69*, 1-19.

Chui, A. C. W., Lloyd, A. E., & Kwok, C. C. Y. (2002). The determination of capital structure: Is national culture a missing piece to the puzzle? *Journal of International Business Studies, 33*(1), 99-127.

Chui, A. C. W., Titman, S., & Wei, K. J. (2010). Individualism and momentum around the world. *The Journal of Finance, 65*(1), 361-392.

Costello, A. M., & Wittenberg-Moerman, R. (2011). The impact of financial reporting quality on debt contracting: Evidence from internal control weakness reports. *Journal of Accounting Research, 49*(1), 97-136.

Coval, J. D., & Moskowitz, T. J. (2001). The geography of investment: Informed trading and asset prices. *Journal of Political Economy, 109*(4), 811-841.

Demiroglu, C., & James, C. (2015). Bank loans and troubled debt restructurings. *Journal of Financial Economics, 118*(1), 192-210.

Deng, S., Willis, R. H., & Xu, L. (2014). Shareholder litigation, reputational loss, and bank loan contracting. *Journal of Financial and Quantitative Analysis, 49*(4), 1101-1132.

Djankov, S., McLiesh, C., & Shleifer, A. (2007). Private credit in 129 countries. *Journal of Financial Economics, 84*(2), 299-329.

Do, V., & Vu, T. (2010). The effects of reputation and relationships on lead banks' certification roles. *Journal of International Financial Markets, Institutions and Money, 20*(5), 475-489.

Dobewall, H., & Rudnev, M. (2014). Common and unique features of Schwartz's and Inglehart's value theories at the country and individual levels. *Cross-Cultural Research, 48*(1), 45-77.

Doupnik, T. S. (2008). Influence of culture on earnings management: A note. *Abacus, 44*(3), 317-340.

Doupnik, T. S., & Richter, M. (2003). Interpretation of uncertainty expressions: A cross-national study. *Accounting, Organizations and Society, 28*(1), 15-35.

Fidrmuc, J. P., & Jacob, M. (2010). Culture, agency costs, and dividends. *Journal of Comparative Economics, 38*(3), 321-339.

Fields, L. P., Fraser, D. R., & Subrahmanyam, A. (2012). Board quality and the cost of debt capital: The case of bank loans. *Journal of Banking & Finance, 36*(5), 1536-1547.

Fincher, C. L., Thornhill, R., Murray, D. R., & Schaller, M. (2008). Pathogen prevalence predicts human cross-cultural variability in individualism/collectivism. *Proc Biol Sci, 275*(1640), 1279-1285.

Gaganis, C., Hasan, I., & Pasiouras, F. (2020). National culture and housing credit. *Journal of Empirical Finance, 56*, 19-41.

Galor, O., & Özak, Ö. (2016). The Agricultural Origins of Time Preference. *American Economic Review, 106*(10), 3064-3103.

Gatev, E., & Strahan, P. E. (2009). Liquidity risk and syndicate structure. *Journal of Financial Economics, 93*(3), 490-504.

Ge, W., Kim, J.-B., & Song, B. Y. (2012). Internal governance, legal institutions and bank loan contracting around the world. *Journal of Corporate Finance, 18*(3), 413-432.

Giannetti, M., & Laeven, L. (2012). The flight home effect: Evidence from the syndicated loan market during financial crises. *Journal of Financial Economics, 104*(1), 23-43.

Giannetti, M., & Yafeh, Y. (2012). Do cultural differences between contracting parties matter? Evidence from syndicated bank loans. *Management Science, 58*(2), 365-383.

Gilson, S. C., John, K., & Lang, L. H. (1990). Troubled debt restructurings: An empirical study of private reorganization of firms in default. *Journal of Financial Economics, 27*(2), 315-353.

Gleason, K. C., Mathur, L. K., & Mathur, I. (2000). The interrelationship between culture, capital structure, and performance: Evidence from European retailers. *Journal of Business Research, 50*(2), 185-191.

Godlewski, C. J., Sanditov, B., & Burger-Helmchen, T. (2012). Bank lending networks, experience, reputation, and borrowing costs: Empirical evidence from the French syndicated lending market. *Journal of Business Finance & Accounting, 39*(1-2), 113-140.

Graham, J., Li, S., & Qiu, J. (2008). Corporate misreporting and bank loan contracting. *Journal of Financial Economics, 89*(1), 44-61.

Gray, S. J. (1988). Towards a theory of cultural influence on the development of accounting systems internationally. *Abacus, 24*(1), 1-15.

Grinblatt, M., & Keloharju, M. (2001). How distance, language, and culture influence stockholdings and trades. *The Journal of Finance, 56*(3), 1053-1073.

Guiso, L., Sapienza, P., & Zingales, L. (2008). Trusting the stock market. *The Journal of Finance, 63*(6), 2557-2600.

Guiso, L., Sapienza, P., & Zingales, L. (2009). Cultural biases in economic exchange. *Quarterly Journal of Economics, 124*(3), 1095–1131.

Hainz, C., Weill, L., & Godlewski, C. J. (2013). Bank competition and collateral: Theory and evidence. *Journal of Financial Services Research, 44*(2), 131-148.

Han, S., Kang, T., Salter, S., & Yoo, Y. K. (2010). A cross-country study on the effects of national culture on earnings management. *Journal of International Business Studies, 41*(1), 123-141.

Hansen, C. W., Jensen, P. S., & Skovsgaard, C. V. (2015). Modern gender roles and agricultural history: The Neolithic inheritance. *Journal of Economic Growth, 20*(4), 365-404.

Harjoto, M., Mullineaux, D. J., & Yi, H. C. (2006). A comparison of syndicated loan pricing at investment and commercial banks. *Financial Management, 35*(4), 49-70.

Haselmann, R., & Wachtel, P. (2011). Foreign banks in syndicated loan markets. *Journal of Banking & Finance, 35*(10), 2679-2689.

He, W., & Hu, M. (2016). Religion and bank loan terms. *Journal of Banking & Finance, 64*, 205-215.

Heckman, J. J. (1979). Sample selection bias as a specification error. *Econometrica: Journal of the Econometric Society, 47*(1), 153-161.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage Publications.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations* (second ed.). Beverly Hills, CA: Sage Publications.

Hollander, S., & Verriest, A. (2016). Bridging the gap: The design of bank loan contracts and distance. *Journal of Financial Economics, 119*(2), 399-419.

House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies*. Thousand Oaks, CA: Sage publications.

Houston, J. F., Itzkowitz, J., & Naranjo, A. (2017). Borrowing beyond borders: Foreign assets, lender choice, and loan pricing in the syndicated bank loan market. *Journal of Corporate Finance, 42*, 315-334.

Inglehart, R. (1997). Modernization, postmodernization and changing perceptions of risk. *International Review of Sociology, 7*(3), 449-459.

Inglehart, R., Basanez, M., & Moreno, A. (1998). Human values and beliefs: A cross-cultural sourcebook. *Ann Arbor: University of Michigan Press*.

Inglehart, R., & Welzel, C. (2005). *Modernization, cultural change, and democracy: The human development sequence*. New York: Cambridge University Press.

Ivashina, V. (2009). Asymmetric information effects on loan spreads. *Journal of Financial Economics, 92*(2), 300-319.

Javakhadze, D., Ferris, S. P., & Sen, N. (2014). An international analysis of dividend smoothing. *Journal of Corporate Finance, 29*, 200-220.

Jiang, F., John, K., Li, C. W., & Qian, Y. (2018). Earthly reward to the religious: Religiosity and the costs of public and private debt. *Journal of Financial and Quantitative Analysis, 53*(5), 2131-2160.

Kahan, M., & Yermack, D. (1998). Investment opportunities and the design of debt securities. *Journal of law, economics, & organization*, 136-151.

Kanagaretnam, K., Lim, C. Y., & Lobo, G. J. (2011). Effects of national culture on earnings quality of banks. *Journal of International Business Studies, 42*(6), 853-874.

Kanagaretnam, K., Lim, C. Y., & Lobo, G. J. (2014). Influence of national culture on accounting conservatism and risk-taking in the banking industry. *The Accounting Review, 89*(3), 1115-1149.

Kashima, E. S., & Kashima, Y. (1998). Culture and Language:The Case of Cultural Dimensionsand Personal Pronoun Use. *Journal of Cross-Cultural Psychology, 29*(3), 461-486.

Kim, J.-B., Song, B. Y., & Zhang, L. (2011). Internal control weakness and bank loan contracting: Evidence from SOX Section 404 disclosures. *The Accounting Review, 86*(4), 1157-1188.

Kirkman, B. L., Lowe, K. B., & Gibson, C. B. (2006). A quarter century of culture's consequences: A review of empirical research incorporating Hofstede's cultural values framework. *Journal of International Business Studies, 37*(3), 285-320.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and finance. *Journal of Political Economy, 106*(6), 1113-1155.

Laeven, M. L., & Valencia, F. (2010). *Resolution of banking crises: The good, the bad, and the ugly*: International Monetary Fund.

Lee, E., Pappas, K., & Xu, A. L. (2020). Foreign Lenders' Adoption of Performance Pricing Provisions in Syndicated Loans. *Journal of Banking & Finance*, 105869.

Levis, M., Muradoğlu, Y. G., & Vasileva, K. (2016). Home bias persistence in foreign direct investments. *The European Journal of Finance, 22*(8-9), 782-802.

Li, K., Griffin, D., Yue, H., & Zhao, L. (2011). National culture and capital structure decisions: Evidence from foreign joint ventures in China. *Journal of International Business Studies, 42*(4), 477-503.

Lian, Y. (2018). Bank competition and the cost of bank loans. *Review of Quantitative Finance and Accounting, 51*(1), 253-282.

Licht, A. N., Goldschmidt, C., & Schwartz, S. H. (2005). Culture, law, and corporate governance. *International Review of Law and Economics, 25*(2), 229-255.

Licht, A. N., Goldschmidt, C., & Schwartz, S. H. (2007). Culture rules: The foundations of the rule of law and other norms of governance. *Journal of Comparative Economics, 35*(4), 659-688.

Lim, J., Minton, B. A., & Weisbach, M. S. (2014). Syndicated loan spreads and the composition of the syndicate. *Journal of Financial Economics, 111*(1), 45-69.

Lin, C., Officer, M. S., Wang, R., & Zou, H. (2013). Directors' and officers' liability insurance and loan spreads. *Journal of Financial Economics, 110*(1), 37-60.

LSTA. (2007). *The handbook of loan syndications and trading* (A. Sansone & A. Taylor Eds.). New York: McGraw-Hill.

Manso, G., Strulovici, B., & Tchistyi, A. (2010). Performance-sensitive debt. *The Review of Financial Studies, 23*(5), 1819-1854.

McCahery, J., & Schwienbacher, A. (2010). Bank reputation in the private debt market. *Journal of Corporate Finance, 16*(4), 498-515.

Mian, A. (2003). Foreign, private domestic, and government banks: New evidence from emerging markets. *Journal of Banking and Finance, 27*(7), 1219-1410.

Mian, A. (2006). Distance constraints: The limits of foreign lending in poor economies. *The Journal of Finance, 61*(3), 1465-1505.

Mourouzidou-Damtsa, S., Milidonis, A., & Stathopoulos, K. (2017). National culture and bank risk-taking. *Journal of Financial Stability*, forthcoming.

Murray, D. R., & Schaller, M. (2010). Historical prevalence of infectious diseases within 230 geopolitical regions: A tool for investigating origins of culture. *Journal of Cross-Cultural Psychology, 41*(1), 99-108.

Nabar, S., & Thai, B. (2007). Earnings management, investor protection, and national culture. *Journal of International Accounting Research, 6*(2), 35-54.

North, D. C. (1990). *Institutions, institutional change and economic performance*. New York, NY: Cambridge university press.

Pan, Y., Yue Wang, T., & Weisbach, M. S. (2017). How management risk affects corporate debt. *The Review of Financial Studies, 31*(9), 3491-3531.

Panyagometh, K., & Roberts, G. S. (2010). Do lead banks exploit syndicate participants? Evidence from ex post risk. *Financial Management, 39*(1), 273-299.
Panyagometh, K., Roberts, G. S., Gottesman, A. A., & Beyhaghi, M. (2013). Performance pricing covenants and corporate loan spreads. *Working Paper*.
Peek, J., & Rosengren, E. S. (1997). The international transmission of financial shocks: The case of Japan. *The American Economic Review, 87*(4), 495-505.
Perera, M. H. B. (1989). Towards a framework to analyze the impact of culture on accounting. *The International Journal of Accounting, 24*(1), 42-56.
Petersen, M. A., & Rajan, R. G. (2002). Does distance still matter? The information revolution in small business lending. *The Journal of Finance, 57*(6), 2533-2570.
Qian, J., & Strahan, P. E. (2007). How laws and institutions shape financial contracts: The case of bank loans. *The Journal of Finance, 62*(6), 2803-2834.
Rajan, R. G. (1992). Insiders and outsiders: The choice between informed and arm's length debt. *The Journal of Finance, 47*(4), 1367-1400.
Reisel, N. (2014). On the value of restrictive covenants: Empirical investigation of public bond issues. *Journal of Corporate Finance, 27*, 251-268.
Ross, D. G. (2010). The "dominant bank effect": How high lender reputation affects the information content and terms of bank loans. *The Review of Financial Studies, 23*(7), 2730-2756.
Schuler, R. S., & Rogovsky, N. (1998). Understanding compensation practice variations across firms: The impact of national culture. *Journal of International Business Studies, 29*(1), 159-177.
Schwartz, S. (2004). Mapping and interpreting cultural differences around the world. In H. Vinken, J. Soeters & P. Ester (Eds.), *Comparing culture, dimensions of culture in comparative perspective*. Leiden, The Netherlands: Brill.
Schwartz, S. H. (1994). *Beyond individualism/collectivism: New cultural dimensions of values*. Thousand Oaks, CA: Sage Publications.
Schwert, M. (2018). Bank capital and lending relationships. *The Journal of Finance, 73*(2), 787-830.
Shao, L., Kwok, C. C., & Guedhami, O. (2010). National culture and dividend policy. *Journal of International Business Studies, 41*(8), 1391-1414.
Shao, L., Kwok, C. C. Y., & Zhang, R. (2013). National culture and corporate investment. *Journal of International Business Studies, 44*(7), 745-763.
Sharpe, S. A. (1990). Asymmetric information, bank lending, and implicit contracts: A stylized model of customer relationships. *The Journal of Finance, 45*(4), 1069-1087.
Siegel, J. I., Licht, A. N., & Schwartz, S. H. (2011). Egalitarianism and international investment. *Journal of Financial Economics, 102*(3), 621-642.
Stock, J., & Yogo, M. (2005). Asymptotic distributions of instrumental variables statistics with many instruments. In D. W. K. Andrews & J. H. Stock (Eds.), *Identification and Inference for Econometric Models: Essays in Honor of Thomas Rothenberg*. Cambridge: Cambridge University Press.
Sufi, A. (2007). Information asymmetry and financing arrangements: Evidence from syndicated loans. *The Journal of Finance, 62*(2), 629-668.
Tang, L., & Koveos, P. E. (2008). A framework to update Hofstede's cultural value indices: economic dynamics and institutional stability. *Journal of International Business Studies, 39*(6), 1045-1063.
Valta, P. (2012). Competition and the cost of debt. *Journal of Financial Economics, 105*(3), 661-682.
Vu, T., Do, V., & Skully, M. (2015). Local versus foreign banks: A home market advantage in loan syndications. *International Review of Financial Analysis, 37*, 29-39.

Weber, Y., Shenkar, O., & Raveh, A. (1996). National and corporate cultural fit in mergers/acquisitions: An exploratory study. *Management Science, 42*(8), 1215-1227.

Whited, T. M., & Wu, G. (2006). Financial constraints risk. *The Review of Financial Studies, 19*(2), 531-559.

Wu, W. S., Chang, H. H., Suardi, S., & Chang, Y. (2013). The cascade effect on lending conditions: Evidence from the syndicated loan market. *Journal of Business Finance & Accounting, 40*(9-10), 1247-1275.

Zheng, C., & Ashraf, B. N. (2014). National culture and dividend policy: International evidence from banking. *Journal of Behavioral and Experimental Finance, 3*, 22-40.

Zheng, X., El Ghoul, S., Guedhami, O., & Kwok, C. C. (2012). National culture and corporate debt maturity. *Journal of Banking & Finance, 36*(2), 468-488.

Zheng, X., El Ghoul, S., Guedhami, O., & Kwok, C. C. (2013). Collectivism and corruption in bank lending. *Journal of International Business Studies, 44*(4), 363-390.

Zhu, H., & Cai, K. (2014). Cultural distance and bond pricing: Evidence in the yankee and rule 144a bond markets. *Journal of Financial Research, 37*(3), 357-384.

Table 1
Definition and Measurement of Variables

Variables	Definition and Measurement
Foreign Lender Culture Variables (Source: specified in below)	
Assertiveness	Cultural score on assertiveness from GLOBE. Source: House et al. (2004)
Embeddedness	Schwartz's cultural score on embeddedness. Source: Licht et al. (2007)
Individualism	Hofstede's cultural score on individualism. Source: Hofstede (2001)
In-group Collectivism	Cultural score on in-group collectivism from GLOBE. Source: House et al. (2004)
Masculinity	Hofstede's cultural score on masculinity. Source: Hofstede (2001)
Mastery	Schwartz's cultural score on mastery. Source: Licht et al. (2007)
Survival	Cultural score on survival versus self-expression values from WVS. Source: WVS
Traditional	Cultural score on traditional versus secular–rational values from WVS. Source: WVS
Borrower Variables (Source: Compustat unless specified)	
σ(ROA)	Standard deviation of *ROA* (defined below) estimated over the previous three to five years as available.
Lerner_US	Banking competition in the U.S. measured by the Lerner index. The Lerner index is measured by the difference between the output price and the marginal cost divided by the output price. Higher values of the Lerner index indicate less banking competition. Source: Global Development Finance Database
CurRatio	Current ratio, calculated as the ratio of current assets (*ACT*) to current liabilities (*LCT*).
Fin Constraints	(Whited & Wu, 2006)Whited and Wu (2006) financial constraints index computed as (-0.091 *CF* - 0.062 *DIVPOS* + 0.021 *Leverage* - 0.044 *Log(Firm Size)* + 0.102 *ISG* - 0.035 *SG*), where *CF* is the ratio of cash flow to total assets (*CHE* / *AT*); *DIVPOS* is an indicator that takes the value of one if the firm pays cash dividends (*DV*) and zero otherwise; *Leverage* and *Firm Size* are defined as in below; *ISG* is the firm's three-digit industry sales growth; and *SG* is firm sales growth ($(Sale_t/Sale_{t-1})$-1).
Firm Size	The firm's total assets (*AT*) in millions of dollars.
Forecast Dispersion	Analyst forecast dispersion measured as the standard deviation of all analyst forecasts in the month prior to the loan issuance date divided by the stock price at the loan issuance date. Source: I/B/E/S
IMR	Inverse Mills ratio obtained from the first stage of Heckman (1979) selection model.
IntCov	Interest coverage rate, measured by the ratio of operating income (*OIBDP*) to interest expense (*XINT*).
Leverage	Ratio of long-term debt (*DLTT*) to total assets (*AT*).
Mar to book	Ratio of the market value of equity plus the book value of debt (*PRCC* × *CSHO* + *LT*) to total assets (*AT*).
MarCon_US	Market condition of the borrower country measured with a principal component analysis combined metric based on three different macroeconomic factors: (1) the difference between the yields on Moody's BAA- and AAA-rated corporate bonds; (2) the difference between the yields on ten-year government securities and three-month Treasury Bill; and (3) yields on the three-month Treasury Bill. A higher value indicates a worse market condition. Source: Federal Reserve Bank of St. Louis
ROA	Return on assets, calculated as net income before extraordinary items (*IB*) divided by average assets (*AT*).

Table 1
Definition and Measurement of Variables

Variables	Definition and Measurement
Tangibility	Ratio of net PPE plus inventory (*PPENT* + *INVT*) to total assets (*AT*).
Z-Score	Altman (1968) Z-score for the likelihood of bankruptcy, computed as (1.2 Working capital + 1.4 Retained earnings + 3.3 EBIT + 0.999 Sales) / Total assets + 0.6 (Market value of equity / Book value of total liabilities) = (1.2 *WCAP* + 1.4 *RE* + 3.3 (*PI* + *XINT* - *IINT*) + 0.999 *SALE*) / *AT* + 0.6 (*PRCC* × *CSHO*) / *LT*.
Loan Variables (Source: DealScan)	
Cov	The total number of covenants included in a loan contract.
Cov_BR	An index that assigns one point (maximum of six) if any of the following covenants exists in a loan: security provision, dividend restriction, more than two restrictions on financial ratios, asset sweep, debt sweep, and equity sweep (Bradley & Roberts, 2015).
Cov_FFS	An index that assigns one point (maximum of three) if any of the following covenant categories exists in a loan: security provision, more than two restrictions on financial ratios, and whether the loan covenants include asset, debt, and/or equity sweeps (Fields et al., 2012).
GeoDist	The shortest distance between the borrower's headquarter and the foreign lead arranger's headquarter in kilometres according to the Vincenty (sphere) method. For loan i, we take the average distance between all foreign lead lenders and the borrower.
InstLoan	An indicator variable equal to one for loans with a type of term loan B, C, D, E, F, G or H (institutional term loans) and zero otherwise.
IntSpread	Interest spread, measured by All in Spread Drawn (*AISD*), which is the annual spread paid over LIBOR for each dollar drawn down from the loan. The commitment fee, annual fee, upfront fee, etc., are all included in the calculation of *AISD*.
LeadRep	An indicator variable equal to one if deal i is syndicated by one of the top 25 lead arrangers in the U.S. syndicated loan market and zero otherwise. The ranking of lead arrangers is based on their previous year market shares, in terms of the total amount of deals that they syndicated. In calculating the market share, the deal amount is split equally among all of the lead arrangers if a deal involves multiple leads. For deal i, *LeadRep* is determined based on the highest ranking of all of its lead arrangers (Ball, Bushman, & Vasvari, 2008).
Lender No.	The number of lenders in the loan syndicate, including both lead arrangers and participant lenders.
Loan Purpose	Loans are divided into seven groups according to their primary purpose: acquisition lines, LBO/MBO/SBO, takeover, debt repay/recapitalization, corporate purpose, working capital, and other purposes.
Loan Size	The loan amount in millions of dollars.
Maturity	Loan maturity in months.
PPP	An indicator variable equal to one if the loan agreement contains performance pricing provisions and zero otherwise.
PreRelation	An indicator variable equal to one if at least one of the lead arrangers of deal i has led the borrower firm's prior deals within the previous five-year period and zero otherwise (Ivashina, 2009).
Revolver	An indicator variable equal to one for revolving loans and zero otherwise. A revolving loan is a loan with a type of any of the following: "Revolver/Line < 1 Yr.", "Revolver/ Line >= 1 Yr.", "Revolver/Term Loan", "364-Day Facility", "Demand Loan", or "Limited Line".
Foreign Lender Country Variables (Source: specified in below)	
Creditor Rights	Creditor rights measured with the index developed by La Porta et al. (1998) and updated by Djankov et al. (2007). This index considers four types of rights that creditors possess in the event of default: (1) there are restrictions, such as creditor consent or minimum dividends, for a debtor to file for reorganization; (2) secured creditors are able to seize their collateral once a reorganization petition is approved; (3) secured creditors are paid first out of the proceeds of liquidating a bankrupt firm; and (4) the administration of the property pending the resolution of the reorganization is passed to creditors or an administrator, rather than retained

Table 1
Definition and Measurement of Variables

Variables	Definition and Measurement
	by the debtor. One point is added to a country if its laws and regulations grant any of the above rights to creditors. The index records the aggregated points for each country, ranging from zero to four with higher values representing stronger creditor rights. Source: La Porta et al. (1998), Djankov et al. (2007)
CtrofCorr	Control of corruption measured with an index that captures perceptions of the extent to which public power is exercised for private gain. A higher value implies less corruption. Source: World Governance Indicators
GDP Growth	Annual percentage growth rate of GDP based on current U.S. dollars. Source: World Bank
GDP per Capita	Gross domestic product in current U.S. dollars divided by the midyear population. Source: World Bank
Inflation	Annual percentage change in the consumer price index. Source: World Bank
Legal Enforcement	Legal enforcement measured using the Berkowitz, Pistor, and Richard (2003) legality index, which aggregates five individual legality proxies from La Porta et al. (1998), namely the effectiveness of the judiciary, rule of law, risk of contract repudiation, absence of corruption, and risk of expropriation, into a parsimonious measure using the principal component analysis. Source: La Porta et al. (1998), Berkowitz et al. (2003)
MCAP	Market capitalization of listed domestic companies divided by GDP. Source: World Development Indicators
PrvCredit	Ratio of private credit to GDP. Private credit is credit from deposit-taking financial institutions to the private sector. Source: IMF
SysBankCrises	An indicator variable equal to one if the foreign lead arrangers' countries of domicile had a systemically important banking crisis for the year t and zero otherwise. Source: Laeven and Valencia (2010), Giannetti and Laeven (2012)
Trade Openness	Ratio of trade (exports plus imports) to GDP. Source: Penn World Tables
Lender Variables (Source: Compustat Bank, Compustat Global)	
Lender Leverage	The average ratio of long-term debt (*DLTT*) to total assets (*AT*) for all foreign lead arrangers in a loan.
Lender ROA	The average return on assets for all foreign lead arrangers in a loan, calculated as the net income before extraordinary items (*IB*) divided by average assets (*AT*).
Lender Size	The average total assets (*AT*) in millions of dollars for all foreign lead arrangers in a loan.

Table 2
Sample Selection Procedure

Selection Procedure	No. of Loans
Dollar denominated and non-dollar denominated loans issued to U.S. companies by foreign lead lenders in the *DealScan* database between Jan 1996-Dec 2017	12,781
- Loans cannot be matched with financial data in *Compustat*	(8,669)
- Loans issued to financial or regulated firms	(1,360)
- Loans missing data on culture variables	(22)
- Loans missing data on other test and control variables	(1509)
Test Sample	1,221

Notes: This table presents the sample selection procedure of the main sample.

Table 3
Sample Distribution

	No. of Loans
Panel A: Sample Distribution by Lender Country	
Canada	424
France	241
Switzerland	203
Netherlands	181
Germany	148
United Kingdom	140
Japan	47
Norway	13
Korea (South)	11
Australia	9
Belgium	9
Austria	5
Spain	5
China	4
Ireland	4
Denmark	2
Hong Kong	2
Italy	2
Russia	2
Bahrain	1
Israel	1
Mexico	1
Portugal	1
Singapore	1
Panel B: Sample Distribution by Industry	
SIC01-09 Agriculture, Forestry, and Fishing	24
SIC10-14 Mining	180
SIC15-17 Construction	16
SIC20-33 Nondurable goods manufacturing	297
SIC34-39 Durable goods manufacturing	305
SIC40-42 Transportation	22
SIC50-51 Wholesale trade	76
SIC52-59 Retail trade	64
SIC70-89 Services	237
Panel C: Sample Distribution by Year	
1996-1998	323
1999-2001	176
2002-2004	210
2005-2007	190
2008-2010	103
2011-2013	130
2014-2017	89

Notes: This table presents the sample distribution by lender country (Panel A), industry (Panel B) and year (Panel C).

Table 4
Summary Statistics

	Test Sample (Foreign Lender Loans) N = 1,221			Comparing Sample (Domestic Lender Loans) N = 19,317		
Variables	*Mean*	*Median*	*Std. Dev.*	*Mean*	*Median*	*Std. Dev.*
Foreign Lender Culture Variables						
Embeddedness	3.335	3.355	0.201			
Mastery	3.803	3.801	0.132			
Borrower Variables						
Firm Size ($m)	3,879.629	1,038.946	9,363.603	3,508.854	845.781***	7,685.668
Leverage	0.289	0.264	0.210	0.244***	0.221***	0.192
IntCov	17.226	5.340	43.283	23.362***	6.941***	61.808
CurRatio	1.842	1.517	1.232	1.931**	1.689***	1.096
Mar to Book	1.730	1.413	0.991	1.708	1.444	0.911
Tangibility	0.466	0.459	0.242	0.457	0.450	0.229
ROA	0.020	0.035	0.110	0.036***	0.046***	0.088
σ (ROA)	0.059	0.032	0.080	0.046***	0.024***	0.061
Z-Score	3.395	2.790	3.099	3.776***	3.307***	2.511
MarCon_US	-0.216	-0.668	1.377	-0.167	-0.414	1.343
Loan Variables						
IntSpread (bps)	231.800	200.000	161.681	187.750***	175.000***	126.038
Cov	4.764	4.000	3.911	4.555***	4.000**	3.433
Cov_BR	2.283	1.000	2.174	2.002***	1.000***	1.982
Cov_FFS	1.303	1.000	1.131	1.130***	1.000***	1.083
Maturity (month)	50.564	60.000	22.585	46.916***	58.000***	21.461
Loan Size ($m)	236.723	125.000	340.549	298.274***	125.000	460.947
InstLoan	0.197	0	0.398	0.076***	0***	0.265
Revolver	0.535	1	0.499	0.721***	1***	0.448
PPP	0.393	0	0.489	0.469***	0***	0.499
LeadRep	0.459	1	0.438	0.682***	1***	0.466
PreRelation	0.425	0	0.495	0.494***	0***	0.500
Lender No.	6.164	4.000	6.207	7.426***	5.000***	7.187
NonDollar	0.035	0	0.184	0.008***	0***	0.087
GeoDist (km)	8,979.382	9,023.852	1,290.359	1,386.060***	1,270.800***	1,004.287
Foreign Lender Country Variables						
GDP per Capita ($)	38,250.038	37,529.395	6,658.253			
GDP Growth (%)	3.300	3.000	2.800			
PrvCredit (%)	111.264	109.484	28.897			
Inflation (%)	1.498	1.358	1.256			

Notes: This table presents the summary statistics of the variables used in the main tests. It also reports the tests of differences in means and medians between the loans led by foreign versus domestic lenders. We use ***, **, and * to denote that the means (t-test) and the medians (Wilcoxon rank sum test) for the compared samples are significantly different at the 1 percent, 5 percent, and 10 percent levels, respectively. The extreme values of all of the continuous variables are winsorized at the 1st and 99th percentiles. Refer to Table 1 for the definition and measurement of variables.

Table 5
Pearson Correlation Matrix

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*
1 *Embeddedness*															
2 *Mastery*	**0.837**														
3 *Log(IntSpread)*	**-0.203**	**-0.135**													
4 Cov	-0.037	-0.013	**0.223**												
5 *Cov_BR*	**-0.080**	-0.038	**0.318**	**0.959**											
6 *Cov_FFS*	**-0.080**	-0.043	**0.383**	**0.892**	**0.952**										
7 Log(Firm Size)	-0.040	-0.009	**-0.275**	**-0.359**	**-0.381**	**-0.395**									
8 Leverage	-0.060	-0.011	**0.193**	**0.097**	**0.138**	**0.166**	0.039								
9 *IntCov*	**0.068**	0.047	**-0.076**	-0.027	-0.025	-0.032	**-0.070**	**-0.348**							
10 CurRatio	0.040	0.039	-0.023	0.017	0.001	-0.008	**-0.137**	**-0.206**	**0.324**						
11 *Mar to Book*	0.006	-0.019	**-0.143**	**-0.081**	**-0.094**	**-0.110**	**-0.068**	**-0.151**	**0.267**	**0.131**					
12 *Tangibility*	**0.143**	0.066	0.003	**0.113**	**0.107**	**0.111**	**-0.105**	**0.228**	**-0.195**	**-0.265**	**-0.212**				
13 *ROA*	-0.028	-0.001	**-0.140**	-0.045	**-0.076**	**-0.088**	**0.145**	**-0.224**	**0.325**	**0.132**	**0.149**	**-0.114**			
14 *σ(ROA)*	-0.047	-0.048	**0.108**	**0.081**	**0.102**	**0.105**	**-0.244**	0.023	-0.052	0.055	**0.145**	0.053	**-0.397**		
15 *Z-Score*	0.057	0.012	**-0.204**	**-0.085**	**-0.124**	**-0.152**	-0.017	**-0.508**	**0.491**	**0.446**	**0.607**	**-0.247**	**0.448**	**-0.093**	
16 *MarCon_US*	-0.059	-0.008	**0.344**	-0.032	-0.016	0.011	**0.147**	0.061	-0.039	0.003	**-0.177**	0.013	-0.048	-0.030	**-0.127**
17 *Log(Maturity)*	**-0.132**	**-0.078**	**0.250**	**0.124**	**0.160**	**0.197**	**-0.102**	**0.096**	-0.011	-0.006	-0.057	-0.023	0.035	-0.057	-0.065
18 *Log(Loan Size)*	**-0.068**	-0.017	**-0.206**	-0.021	-0.056	**-0.086**	**0.480**	**0.116**	-0.006	-0.057	**-0.078**	0.064	**0.105**	**-0.114**	-0.020
19 *InstLoan*	**-0.199**	**-0.083**	**0.344**	0.064	**0.149**	**0.205**	0.059	**0.192**	-0.025	0.001	**-0.070**	**-0.091**	0.004	0.012	**-0.101**
20 *Revolver*	**0.105**	0.025	**-0.279**	0.008	-0.054	**-0.086**	**-0.072**	**-0.090**	-0.022	-0.030	-0.026	**0.097**	-0.003	0.008	0.014
21 *PPP*	**0.109**	0.065	**-0.132**	**0.470**	**0.407**	**0.378**	**-0.108**	-0.003	0.016	-0.020	-0.052	**0.112**	0.057	-0.030	0.007
22 *LeadRep*	**-0.111**	-0.009	0.005	-0.049	-0.046	-0.031	**0.224**	**0.107**	0.023	0.019	0.031	-0.063	0.036	-0.024	-0.029
23 *PreRelation*	-0.055	-0.060	-0.043	0.029	0.022	0.029	**0.136**	**0.116**	-0.055	-0.051	-0.032	**0.091**	0.029	-0.028	-0.048
24 *Log(Lender No.)*	0.045	-0.003	**-0.183**	**0.252**	**0.174**	**0.123**	**0.156**	-0.018	-0.020	**-0.106**	**-0.073**	**0.119**	**0.069**	**-0.068**	0.035
25 *NonDollar*	**0.089**	**0.084**	**-0.076**	-0.017	-0.022	-0.021	**0.080**	-0.037	-0.007	0.000	0.003	-0.016	0.030	-0.045	0.029
26 *Log(GeoDist)*	**-0.430**	**-0.331**	**0.080**	0.060	**0.087**	**0.080**	-0.030	0.013	0.010	-0.019	0.014	**0.102**	0.001	**0.115**	0.022
27 *Log(GDP per Capita)*	**-0.138**	**0.133**	**0.300**	-0.010	0.024	0.040	**0.164**	**0.085**	**0.072**	**0.078**	0.017	**-0.156**	**0.094**	-0.022	0.008
28 *GDP Growth*	-0.025	-0.012	**-0.166**	0.017	0.016	0.006	-0.033	-0.018	0.065	0.012	**0.111**	-0.008	0.027	0.042	**0.073**
29 *PrvCredit*	-0.043	**0.199**	**0.156**	-0.026	-0.001	0.004	0.053	-0.008	**0.104**	**0.119**	0.013	**-0.184**	**0.083**	-0.019	0.051
30 *Inflation*	**0.272**	**0.118**	-0.055	0.063	0.027	0.023	-0.036	**-0.072**	0.035	-0.007	**0.078**	0.059	-0.007	0.019	**0.087**

Table 5
Pearson Correlation Matrix

	16	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*
16 *MarCon_US*														
17 *Log(Maturity)*	**-0.070**													
18 *Log(Loan Size)*	**0.176**	-0.010												
19 *InstLoan*	**0.094**	**0.306**	**0.147**											
20 *Revolver*	-0.043	**-0.250**	-0.001	**-0.517**										
21 *PPP*	-0.032	0.017	**0.133**	**-0.207**	**0.230**									
22 *LeadRep*	**0.123**	0.006	**0.300**	**0.136**	-0.038	0.019								
23 *PreRelation*	**0.111**	-0.025	**0.250**	0.043	**0.074**	**0.078**	**0.215**							
24 *Log(Lender No.)*	0.051	-0.001	**0.403**	**-0.173**	**0.195**	**0.325**	**0.095**	**0.153**						
25 *NonDollar*	**0.075**	**-0.080**	-0.005	-0.018	-0.030	0.052	-0.003	-0.017	-0.028					
26 *Log(GeoDist)*	-0.021	0.013	-0.023	0.048	-0.043	**-0.068**	-0.015	0.053	-0.041	**-0.076**				
27 *Log(GDP per Capita)*	**0.332**	0.066	**0.273**	**0.277**	**-0.137**	-0.049	**0.283**	**0.071**	**-0.070**	0.014	0.032			
28 *GDP Growth*	**-0.532**	0.026	0.007	-0.006	0.017	-0.015	0.045	**-0.068**	-0.059	**-0.072**	0.062	-0.019		
29 *PrvCredit*	**0.226**	0.025	**0.083**	**0.160**	**-0.114**	**-0.091**	**0.103**	-0.035	**-0.122**	0.060	0.001	**0.554**	**-0.087**	
30 *Inflation*	**-0.069**	**-0.115**	0.005	**-0.118**	0.039	**0.078**	-0.014	-0.010	**0.094**	-0.045	**-0.131**	**-0.105**	**0.305**	**-0.242**

Notes: This table presents the Pearson correlation coefficients among the variables used in the main tests. Refer to Table 1 for the definition and measurement of variables. Figures in bold denote significance at the 1 percent level (two-tailed).

Table 6
Impact of Foreign Lenders' National Cultures on Interest Spreads

		Dependent Variable: Log(IntSpread)			
	Pred. Sign	(1)	(2)	(3)	(4)
Foreign Lender Culture Variables					
Embeddedness	-	-0.310***		-0.396***	
		(-2.77)		(-3.46)	
Mastery	?		-0.414**		-0.475***
			(-2.53)		(-2.95)
Borrower Variables					
Log(Firm Size)	-	-0.159***	-0.160***	-0.156***	-0.157***
		(-6.53)	(-6.67)	(-6.59)	(-6.65)
Leverage	+	0.482***	0.494***	0.484***	0.488***
		(3.64)	(3.74)	(3.77)	(3.78)
IntCov	-	-0.000	-0.000	-0.000	-0.000
		(-0.43)	(-0.50)	(-0.41)	(-0.51)
CurRatio	-	-0.012	-0.013	-0.014	-0.015
		(-0.53)	(-0.62)	(-0.63)	(-0.70)
Mar to Book	-	-0.077***	-0.078***	-0.075***	-0.076***
		(-2.92)	(-2.85)	(-2.79)	(-2.70)
Tangibility	-	-0.104	-0.129	-0.113	-0.127
		(-0.82)	(-0.99)	(-0.84)	(-0.93)
ROA	-	-0.394**	-0.364**	-0.365*	-0.340*
		(-2.32)	(-2.14)	(-1.96)	(-1.84)
σ(ROA)	+	0.268	0.296	0.263	0.295
		(0.84)	(0.92)	(0.86)	(0.94)
Z-Score	-	0.009	0.009	0.008	0.008
		(0.91)	(0.90)	(0.86)	(0.79)
MarCon_US	+	0.066	0.072	0.066	0.073
		(0.92)	(1.02)	(0.91)	(1.04)
Loan Variables					
Log(Maturity)	+	0.114***	0.116***	0.114**	0.117***
		(2.62)	(2.67)	(2.54)	(2.64)
Log(Loan Size)	-	-0.131***	-0.129***	-0.133***	-0.131***
		(-8.98)	(-9.00)	(-9.56)	(-9.35)
InstLoan	+	0.263***	0.270***	0.262***	0.266***
		(4.29)	(4.45)	(4.16)	(4.17)
Revolver	-	-0.174***	-0.173***	-0.175***	-0.175***
		(-4.96)	(-5.01)	(-4.97)	(-4.95)
PPP	-	-0.135***	-0.138***	-0.138***	-0.140***
		(-2.95)	(-3.00)	(-3.11)	(-3.17)
LeadRep	-	-0.012	-0.002	-0.027	-0.019
		(-0.26)	(-0.05)	(-0.57)	(-0.38)
PreRelation	?	0.022	0.019	0.017	0.015
		(0.44)	(0.39)	(0.35)	(0.32)
Log(Lender No.)	-	0.019	0.018	0.015	0.015
		(0.68)	(0.64)	(0.55)	(0.55)
NonDollar	?	-0.240**	-0.245**	-0.210*	-0.220**
		(-2.22)	(-2.27)	(-1.96)	(-2.06)
Log(GeoDist)	+	0.011	0.077	0.041	0.115
		(0.06)	(0.49)	(0.26)	(0.73)
Foreign Lender Country Variables					
Log(GDP per Capita)	-			0.068	0.183
				(0.31)	(0.83)
GDP Growth	-			-1.058	-0.868
				(-0.98)	(-0.75)
PrvCredit	-			-0.000	0.000
				(-0.04)	(0.14)
Inflation	+			0.064**	0.054**
				(2.53)	(2.25)

Table 6
Impact of Foreign Lenders' National Cultures on Interest Spreads

		Dependent Variable: Log(IntSpread)			
	Pred. Sign	(1)	(2)	(3)	(4)
Intercept		7.351**	6.826**	6.408**	4.498
		(2.53)	(2.41)	(2.09)	(1.60)
Loan Purpose		Yes	Yes	Yes	Yes
Industry Effects		Yes	Yes	Yes	Yes
Year Effects		Yes	Yes	Yes	Yes
No. of Observations		1,221	1,221	1,221	1,221
Adjusted R^2		59.9%	59.9%	60.3%	60.2%

Notes: This table presents the regression results of the impact of foreign lenders' national cultures on interest spreads. t-statistics reported in parentheses are based on standard errors corrected for heteroskedasticity and clustered by firm and year. The extreme values of all the continuous variables are winsorized at the 1st and 99th percentiles. The definition and measurement of variables are presented in Table 1. *, **, *** denote significance at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).

Table 7
Robustness Tests

		Dependent Variable: Log(IntSpread)	
	Pred. Sign	(1)	(2)
Panel A: Exclude Loans with Multiple Leads			
Embeddedness	-	-0.352***	
		(-2.88)	
Mastery	?		-0.458***
			(-2.72)
Intercept, Controls, and Fixed Effects		Yes	Yes
No. of Observations		1,070	1,070
Adjusted R^2		58.7%	58.7%
Panel B: Correct Sample Selection Bias			
Embeddedness	-	-0.392***	
		(-3.64)	
Mastery	?		-0.449***
			(-2.72)
IMR	?	-0.712***	-0.726***
		(-4.68)	(-5.10)
Intercept, Controls, and Fixed Effects		Yes	Yes
No. of Observations		1,221	1,221
Adjusted R^2		61.7%	61.6%
Panel C: 2SLS Analysis (2nd Stage)			
Embeddedness (fitted)	-	-0.364***	
		(-2.65)	
Mastery (fitted)	?		-0.549***
			(-2.60)
Intercept, Controls, and Fixed Effects		Yes	Yes
No. of Observations		1,221	1,221
Adjusted R^2		36.6%	36.3%
Cragg–Donald Wald F-statistic		649.794	818.000
Stock–Yogo critical value		60.295	19.93
Kleibergen–Paap rk LM statistic		14.850	15.86
		(p-value = 0.001)	(p-value = 0.000)

Notes: This table presents the results of the robustness tests. In Panel A, we exclude loans with multiple lead arrangers. In Panel B, we correct for sample selection bias. Panel C reports the second stage regression results of the 2SLS analysis treating *Embeddedness* and *Mastery* as endogenous variables. The instrumental variables used for *Embeddedness* are pathogen prevalence and pronoun drop, and the instrumental variables used for *Mastery* are agriculture potential and pronoun drop. The intercept, controls, and fixed effects are included as in Table 6 but not reported. t-statistics reported in parentheses are based on standard errors corrected for heteroskedasticity and clustered by firm and year. The extreme values of all the continuous variables are winsorized at the 1st and 99th percentiles. The definition and measurement of variables are presented in Table 1. *, **, *** denote significance at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).

Table 8
Robustness Tests: Additional Country and Lender-Specific Controls

		Dependent Variable: Log(IntSpread)					
	Pred. Sign	(1)	(2)	(3)	(4)	(5)	(6)
Foreign Lender Culture Variables							
Embeddedness	-	-0.373***		-0.503***		-0.749***	
		(-3.06)		(-4.42)		(-3.45)	
Mastery	?		-0.448***		-0.568***		-0.578*
			(-2.87)		(-3.42)		(-1.93)
Foreign Lender Formal Institutions							
Creditor Rights	?	-0.033	-0.039*				
		(-1.33)	(-1.69)				
Legal Enforcement	?	0.064	0.071				
		(1.29)	(1.48)				
Additional Foreign Lender Country Variables							
Trade Openness	-			-0.001	-0.001		
				(-1.31)	(-0.76)		
CtrofCorr	?			0.347***	0.308***		
				(2.83)	(2.70)		
MCAP	-			0.000	0.001		
				(0.29)	(1.17)		
SysBankCrises	+			0.129***	0.102*		
				(3.59)	(1.66)		
Lender Variables							
Log(Lender Size)	-					-0.251***	-0.186***
						(-3.31)	(-2.78)
Lender ROA	-					-16.018	-22.478**
						(-1.45)	(-1.99)
Lender Leverage	+					-0.204	0.029
						(-0.08)	(0.01)
Intercept, Controls, and Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
No. of Observations		1,211	1,211	1,221	1,221	891	891
Adjusted R^2		60.3%	60.2%	60.6%	60.4%	64.2%	63.3%

Notes: This table presents the robustness test results of including additional control variables. The intercept, controls, and fixed effects are included as in Table 6 but not reported. t-statistics reported in parentheses are based on standard errors corrected for heteroskedasticity and clustered by firm and year. The extreme values of all the continuous variables are winsorized at the 1st and 99th percentiles. The definition and measurement of variables are presented in Table 1. *, **, *** denote significance at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).

Table 9
Robustness Tests: Alternative Culture Measures

		Dependent Variable: Log(IntSpread)	
	Pred. Sign	(1)	(2)
Panel A: Hofstede			
Individualism	+	0.005**	
		(2.31)	
Masculinity	?		-0.000
			(-0.06)
Intercept, Controls, and Fixed Effects		Yes	Yes
No. of Observations		1,221	1,221
Adjusted R^2		60.0%	59.7%
Panel B: WVS			
Survival	+	0.194**	
		(2.09)	
Traditional	-		-0.018
			(-0.26)
Intercept, Controls, and Fixed Effects		Yes	Yes
No. of Observations		1,204	1,204
Adjusted R^2		59.7%	59.6%
Panel C: GLOBE			
In-group Collectivism	-	-0.499**	
		(-2.01)	
Assertiveness	?		-0.126***
			(2.95)
Intercept, Controls, and Fixed Effects		Yes	Yes
No. of Observations		1,203	1,203
Adjusted R^2		62.9%	63.2%

Notes: This table presents the robustness test results of using alternative culture measures. Panel A uses Hofstede's cultural values. Panel B uses the World Values Survey (WVS) cultural dimensions. Panel C uses the Global Leadership and Organizational Behaviour Effectiveness (GLOBE) cultural dimensions. The intercept, controls, and fixed effects are included as in Table 6 but not reported. t-statistics reported in parentheses are based on standard errors corrected for heteroskedasticity and clustered by firm and year. The extreme values of all the continuous variables are winsorized at the 1st and 99th percentiles. The definition and measurement of variables are presented in Table 1. *, **, *** denote significance at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).

Table 10
Conditional Effects: Information Asymmetry

	Pred. Sign	*Dependent Variable: Log(IntSpread)*			
		(1) Low	(2) High	(3) Low	(4) High
Panel A: Presence of Prior Lending Relationship (*PreRelation*)					
	more negative in the low group	-0.478***	-0.025		
		(-3.06)	(-0.09)		
Mastery				-0.691**	-0.018
				(-2.56)	(-0.06)
Low=High (Chi-squared, p-value)		0.063		0.047	
Intercept, Controls, and Fixed Effects		Yes	Yes	Yes	Yes
No. of Observations		702	519	702	519
Adjusted R^2		59.7%	66.3%	59.6%	66.4%
Panel B: Borrower Information Environment (*Forecast Dispersion*)					
Embeddedness	more negative in the high group	-0.131	-0.799***		
		(-0.59)	(-2.82)		
Mastery				0.104	-0.918***
				(0.27)	(-2.99)
Low=High (Chi-squared, p-value)		0.035		0.030	
Intercept, Controls, and Fixed Effects		Yes	Yes	Yes	Yes
No. of Observations		343	329	343	329
Adjusted R^2		64.8%	70.1%	64.8%	69.5%
Panel C: Lender-Borrower Geographical Distance (*GeoDist*)					
Embeddedness	more negative in the high group	-0.148	-0.680***		
		(-0.65)	(-2.89)		
Mastery				-0.100	-0.837**
				(-0.29)	(-2.32)
Low=High (Chi-squared, p-value)		0.044		0.047	
Intercept, Controls, and Fixed Effects		Yes	Yes	Yes	Yes
No. of Observations		641	580	641	580
Adjusted R^2		58.6%	65.9%	58.6%	65.5%

Notes: This table presents the conditional test results on the impact of information asymmetry on the relation between foreign lenders' national cultures and interest rate. Information asymmetry is proxied by the presence of prior lending relationships between the foreign lenders and the borrower (*PreRelation*) in Panel A, the borrower's information environment measured by the analysts' forecast dispersion on the borrower (*Forecast Dispersion*) in Panel B, and the geographical distance between the foreign lenders and the borrower (*GeoDist*) in Panel C. The sample is split into low and high subsamples by the median of the conditional variables, or zero and one subsamples when the conditional variable is a dummy variable. The F-test is used to test the statistical difference in the coefficients on *Embeddedness* and *Mastery* across the two subsamples, and the p-value is reported. The intercept, controls, and fixed effects are included as in Table 6 but not reported. t-statistics reported in parentheses are based on standard errors corrected for heteroskedasticity and clustered by firm and year. The extreme values of all the continuous variables are winsorized at the 1st and 99th percentiles. The definition and measurement of variables are presented in Table 1. *, **, *** denote significance at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).

Table 11
Conditional Effects: Foreign Lender Bargaining Power

		Dependent Variable: Log(IntSpread)			
	Pred. Sign	(1) Low	(2) High	(3) Low	(4) High
Panel A: Borrower Financial Constraints (*Fin Constraints*)					
Embeddedness	more negative in the high group	0.020	-0.498***		
		0.12)	(-4.30)		
Mastery				0.034	-0.671***
				(0.15)	(4.18)
Low=High (Chi-squared, p-value)		0.049		0.044	
Intercept, Controls, and Fixed Effects		Yes	Yes	Yes	Yes
No. of Observations		618	597	618	597
Adjusted R^2		65.6%	50.1%	65.6%	51.0%
Panel B: Lerner Index in the U.S. (*Lerner_US*)					
Embeddedness	more negative in the high group	-0.406**	-0.943***		
		(-2.29)	(-5.57)		
Mastery				-0.654**	-1.132***
				(-2.21)	(-4.74)
Low=High (Chi-squared, p-value)		0.046		0.243	
Intercept, Controls, and Fixed Effects		Yes	Yes	Yes	Yes
No. of Observations		609	555	609	555
Adjusted R^2		55.5%	63.4%	55.4%	62.7%
Panel C: Market Condition in the U.S. (*MarCon_US*)					
Embeddedness	more negative in the high group	-0.307**	-0.827***		
		(-2.68)	(-4.05)		
Mastery				-0.351	-0.998***
				(-2.19)	(-3.49)
Low=High (Chi-squared, p-value)		0.022		0.042	
Intercept, Controls, and Fixed Effects		Yes	Yes	Yes	Yes
No. of Observations		878	343	878	343
Adjusted R^2		58.0%	65.9%	57.8%	70.3%

Notes: This table presents the conditional test results on the impact of lender bargaining power on the relation between foreign lenders' national cultures and interest rate. Lender bargaining power is proxied by the borrower's financial constraints (*Fin Constraints*) in Panel A, Lerner index in the U.S., which is a reverse measure of banking competition (*Lerner_US*) in Panel B, and the market condition in the U.S. (*MarCon_US*) in Panel C. The sample is split into low and high subsamples by the median of the conditional variables. The F-test is used to test the statistical difference in the coefficients on *Embeddedness* and *Mastery* across the two subsamples, and the p-value is reported. The intercept, controls, and fixed effects are included as in Table 6 but not reported. t-statistics reported in parentheses are based on standard errors corrected for heteroskedasticity and clustered by firm and year. The extreme values of all the continuous variables are winsorized at the 1st and 99th percentiles. The definition and measurement of variables are presented in Table 1. *, **, *** denote significance at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).

Table 12
Impact of Foreign Lenders' National Cultures on Covenant Intensity

Dependent Variable:		*Cov*		*Cov_BR*		*Cov_ FFS*	
	Pred. Sign	(1)	(2)	(3)	(4)	(5)	(6)
Foreign Lender Culture Variables							
Embeddedness	-	-0.332**		-0.467**		-0.346*	
		(-2.28)		(-2.29)		(-1.92)	
Mastery	?		-0.343*		-0.495*		-0.462*
			(-1.79)		(-1.89)		(-1.96)
Borrower Variables							
Log(Firm Size)	-	-0.151***	-0.153***	-0.239***	-0.240***	-0.233***	-0.234***
		(-6.88)	(-6.94)	(-8.32)	(-8.35)	(-8.22)	(-8.26)
Leverage	+	0.358***	0.365***	0.577***	0.591***	0.572***	0.579***
		(2.79)	(2.82)	(3.72)	(3.76)	(4.00)	(4.03)
IntCov	-	-0.000	-0.001	-0.001	-0.001	-0.000	-0.000
		(-0.75)	(-0.78)	(-0.61)	(-0.62)	(-0.28)	(-0.32)
CurRatio	-	0.028	0.026	0.032	0.029	0.011	0.009
		(1.14)	(1.05)	(1.05)	(0.95)	(0.38)	(0.30)
Mar to Book	-	-0.005	-0.006	-0.084**	-0.085**	-0.101**	-0.103**
		(-0.16)	(-0.20)	(-2.12)	(-2.15)	(-2.53)	(-2.58)
Tangibility	-	0.146	0.132	0.185	0.168	0.183	0.173
		(1.05)	(0.95)	(1.00)	(0.91)	(1.14)	(1.08)
ROA	-	-0.147	-0.138	-0.455	-0.440	-0.452*	-0.440
		(-0.58)	(-0.54)	(-1.59)	(-1.52)	(-1.69)	(-1.64)
σ(ROA)	+	0.180	0.197	-0.126	-0.108	-0.154	-0.137
		(0.71)	(0.78)	(-0.36)	(-0.31)	(-0.49)	(-0.44)
Z-Score	-	-0.003	-0.003	-0.006	-0.006	-0.001	-0.001
		(-0.23)	(-0.24)	(-0.41)	(-0.43)	(-0.23)	(-0.23)
MarCon_US	+	0.056	0.058	0.066	0.069	0.099	0.103
		(1.05)	(1.09)	(0.94)	(0.99)	(1.51)	(1.58)
Loan Variables							
Log(Maturity)	+	-0.013	-0.012	0.077	0.079	0.132**	0.134**
		(-0.34)	(-0.30)	(1.45)	(1.49)	(2.49)	(2.52)
Log(Loan Size)	-	-0.026	-0.023	-0.060*	-0.056*	-0.076***	-0.074**
		(-1.03)	(-0.91)	(-1.87)	(-1.75)	(-2.62)	(-2.54)
InstLoan	+	0.344***	0.347***	0.459***	0.464***	0.478***	0.481***
		(6.37)	(6.38)	(7.14)	(7.14)	(7.79)	(7.83)
Revolver	?	0.022	0.024	-0.015	-0.012	-0.014	-0.012
		(0.57)	(0.63)	(-0.34)	(-0.26)	(-0.32)	(-0.28)
PPP	+	0.558***	0.556***	0.621***	0.618***	0.544***	0.543***
		(11.42)	(11.35)	(10.34)	(10.23)	(9.87)	(9.85)
LeadRep	?	0.008	0.014	0.053	0.059	0.062	0.069
		(0.17)	(0.30)	(0.86)	(0.95)	(1.12)	(1.24)
PreRelation	?	0.032	0.031	0.052	0.050	0.084*	0.081
		(0.72)	(0.69)	(0.94)	(0.90)	(1.67)	(1.61)
Log(Lender No.)	-	0.134***	0.133***	0.123***	0.121***	0.097***	0.096***
		(4.82)	(4.75)	(3.31)	(3.25)	(2.80)	(2.74)
NonDollar	?	0.157	0.153	0.187	0.181	0.108	0.102
		(1.61)	(1.56)	(1.54)	(1.49)	(0.94)	(0.89)
Log(GeoDist)	+	0.291	0.373**	0.585**	0.697***	0.505**	0.562***
		(1.52)	(2.00)	(2.36)	(2.93)	(2.21)	(2.58)
Foreign Lender Country Variables							
Log(GDP per Capita)	?	0.281	0.392	0.056	0.229	-0.139	-0.013
		(0.91)	(1.23)	(0.16)	(0.63)	(-0.48)	(-0.05)
GDP Growth	?	0.055**	0.048**	0.061**	0.051*	0.042*	0.039*
		(2.38)	(2.18)	(2.17)	(1.90)	(1.68)	(1.65)
PrvCredit	?	0.002	0.002	0.003*	0.003**	0.002*	0.003*
		(1.55)	(1.62)	(1.95)	(2.00)	(1.66)	(1.77)
Inflation	?	0.063***	0.055**	0.066**	0.055*	0.066**	0.060**
		(2.82)	(2.54)	(2.16)	(1.89)	(2.39)	(2.24)

Intercept	-4.282	-6.517	-7.166	-10.377**	-4.847	-6.450
	(-0.97)	(-1.54)	(-1.33)	(-1.98)	(-1.03)	(-1.41)
Loan Purpose	Yes	Yes	Yes	Yes	Yes	Yes
Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of Observations	1,221	1,221	1,221	1,221	1,221	1,221
Adjusted R^2	27.4%	27.4%	27.5%	27.4%	19.7%	19.7%

Notes: This table presents the Poisson regression results of the impact of foreign lenders' national cultures on covenant intensity. z-statistics reported in parentheses are based on standard errors corrected for heteroskedasticity and clustered by firm. The extreme values of all the continuous variables are winsorized at the 1st and 99th percentiles. The definition and measurement of variables are presented in Table 1. *, **, *** denote significance at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.